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SIX VOLUMES, in Boards, TWO GUINEAS and a HALF.

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PREFACE

TO THE

SIXTH VOLUME.

THE independent and liberal manner in which the Editors of this work have endeavoured to execute the task they imposed on themselves, and the unremitting attention they have scrupulously paid to the performance of their original design,—the early diffusion of practical knowledge,—has amply rewarded their exertions, and secured a flattering reputation to the LONDON MEDICAL REVIEW, in every quarter of the world.

At the commencement of their labours, the Projectors of this work regretted, that British Practitioners were then "possessed of no *Monthly Journal* in which the state of medical science was regularly detailed;" but, no sooner had they expressed their wish to supply this desideratum, than a new publication appeared, which might perhaps be considered as a rival in the field of literature. The LONDON MEDICAL REVIEW, and the MEDICAL AND PHYSICAL JOURNAL, however, in the general plan and execution of their design, were sufficiently distinct to meet with equal encouragement from the public.

Toward the completion of their sixth volume, (which will be found in no respect less interesting than the former,) an arrangement took place between the proprieters of both these MONTHLY publications, which cannot fail to be attended with great advantages to the medical world. The nature of this arrangement has been explicitly stated in the twenty eighth Number of the present volume; and the effect of it must be, to gratify a large proportion of readers who entertain dissimilar views in perusing the respective works alluded to.

If the extracts hitherto given from the various books reviewed by the Editors, have been copious and satisfactory, the plan which has recently been adopted will enable them to present professional men with at least equally extensive analyses of a much greater number of publications, than could otherwise have been done. Although it has always been their endeavour to select the most useful and novel works, foreign as well as domestic, the confined plan of the London Medical Review, in its most essential department, precluded the possibility of noticing a very considerable proportion of interesting books daily issuing from the press.

In conclusion, the Proprietors and Editors acknowledge their obligations to numerous friends, who have assisted in the promotion of their design: they also beg leave to renew their promises, of continuing to use their utmost ability towards the advancement of the healing art, both in its fundamental and collateral branches.

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THE

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ANALYSIS OF BOOKS.

ART. I. *Transactions of the American Philosophical Society, held at Philadelphia, for promoting useful Knowledge. Vol. IV.* Quarto. 531 pages. DOBSON, Philadelphia. 1799.

THIS interesting volume contains seventy-six papers, of which a few only are remotely allied to medical subjects. The first is entitled,

Experiments and Observations relating to the Analysis of atmospherical Air. By the Rev. Dr. J Priestley.

It is an essential part of the antiphlogistic theory, that in all the cases of what Dr. Priestley calls the phlogistication of air, there is simply an absorption of the dephlogisticated air; or, as the advocates of that theory term it, the oxygen contained in it, leaving the phlogisticated part, which they call azote, as it originally existed in the atmosphere. Also, according to the principles of this system, azote is a simple substance, at least not hitherto analysed into any other: they therefore suppose that there is a determinate proportion between the quantities of oxygen and azote in every portion of atmospherical air, and that all that has hitherto been done has been to separate them from one another. This proportion they state to be about 27 parts of oxygen and 73 of azote, in 100 of atmospherical air.

But in every case of the diminution of atmospherical air, in which this is the result, Dr. P. says, there appears to be something emitted from the substance which the antiphlogistians suppose to act by simple absorption, and therefore that it is more probable there is some substance, and the same which has been called phlogiston, or the principle of inflammability (being common to all bodies capable of combustion, and transferable from any one of them to any other,) emitted, and that this phlogiston, uniting with part of the dephlogisticated air, forms with it part of the phlogisticated air which is found after the process; in some cases there is more of this, and in others less. Also, in some cases fixed air is the result of the union of the same constituent principles.

Various experiments are here cited to illustrate the author's opinion, and, as he thinks, tending to refute the antiphlogistic doctrine.

The second article exhibits some

Farther Experiments relating to the Generation of Air from Water. By the Rev. Dr. J. Priestley.

A number of astronomical and mathematical papers next follow, which we pass over as not connected with our design. There are likewise many (of which we shall notice a few) that elucidate certain parts of natural history. The fourteenth article contains

An Inquiry into the Causes of the Insalubrity of flat and marshy Situations; and Directions for preventing or correcting the Effects thereof. By William Currie.

The atmosphere in salutary situations has been demonstrated by M. Lavoisier and his colleagues, to be a compound body, consisting of two distinct gases or aeriform fluids, the one called azote or nitrogen gas, and the other oxygen gas or pure respirable air; and that in 100 parts of the atmosphere the proportions of these gases are 72 of the azote, and 28 of oxygen, or as three to one.

From Mr. Vanbreda's experiments on the atmosphere of marshes in the autumnal season, which he subjected to the common test of nitrous air in the eudiometer, it appears that these proportions were very different, there being but 14 or 15 parts of oxygen to 84 or 85 of azote; but that the bulk was supplied and the same weight preserved by a certain quantity of carbonic gas or fixed air, and a small portion of hydrogen and ammoniacal gases or aeriform fluids.

All these gases are the effects of vegetable and animal putrefaction,

putrefaction, and must be derived from the soil, or the vegetable and animal substances connected with the soil.

The soil of marshes is composed entirely of vegetable and animal substances which have undergone the process of putrefaction, and consists principally of vegetable earth, carbon or charcoal, and nitre, mixed with more or less calcareous and argillaceous earth, and by distillation affords oil, hydrogen, and azote.

From this soil, and from the various vegetable and animal substances mixed with it, and constantly putrefying in hot weather, it has been supposed miasmata issue, which give origin to the diseases peculiar to marshy situations; and as there are no substances but those gases already enumerated, which can be discovered to issue from a marshy soil, or from putrefying vegetable or animal substances, if those diseases depend upon miasmata or effluvia, these miasmata must consist of one or more of the gases enumerated.

In order to determine this matter, the author here inquires into the effects which these substances usually produce on the living body, either singly or combined; and from the whole he concludes, that the cause of the unwholesomeness of low and moist situations in the summer and autumnal months is not owing to any invisible miasmata or noxious effluvia which issue from the soil and lurk in the air, but to a very different cause, viz. to a deficiency of the oxygenous portion of the atmosphere in such situations, in consequence of vegetable and animal putrefaction, in conjunction with the exhausting and debilitating heat of the days, and the sedative power of the cold and damp air of the nights.

For want of the refreshing and salutary stimulus of pure air, all the functions of the body are performed imperfectly and languidly. The nervous system in particular becomes preternaturally susceptible of impressions from every change that occurs in the temperature of the surrounding atmosphere. The application of, or exposure to, a damper and colder state of the air than usual, renders the vessels on the surface of the body powerless and atonic; the brain and heart sympathise with the extreme nerves and vessels; the power of every function of the body declines, till the heart, roused by accumulating blood, reacts with increasing velocity, and is relieved of the unusual burden.

That these are the true causes, the author thinks, is rendered nearly certain, from the frequent occurrence of those diseases (which have heretofore been supposed to depend upon the

operation of specific miasmata) in situations remote from marshy ground, particularly in large and populous cities, where sedentary occupations and want of exercise render the inhabitants delicate and infirm. He has seen numerous instances of this kind, even in the winter season, when no effluvia from marshes could possibly exist, especially among those who had been previously debilitated by other disorders. Nor is it uncommon for persons who have recovered from intermittents in the autumn to have frequent recurrences of the same disease in the winter, merely from sitting in a damp room, or other exposure to cold.

In persons much reduced by the diseases of autumn, it is also very common, when attacked with the inflammatory diseases of winter, for the system to resume its customary habits of action, and for the fever to resemble an intermittent in the time and manner of its exacerbations and remissions, and immediately after the removal of the local affection to become a regular intermittent. This is so often the case, he says, on the eastern shore of Maryland, that the physicians in that country seldom make much use of the lancet in any of the diseases which occur there, except in the spring season. Are we not authorized from these facts to infer, that any circumstances which occasion a certain state of debility and irritability in the vessels and nerves on the surface of the body and in the sensorium at the same time, are predisposing causes of the diseases we are now considering; and that when the system is in this condition, by whatever cause induced, the sudden application of cold, terror, or any other suddenly debilitating power, may become the exciting or occasional cause of febrile disease, in an indirect manner, by repelling the blood to the heart, lungs, and brain, and forcing them to react by the stimulus of distention?

If the diseases of marshy situations were produced by a specific matter, they could never be produced by any other cause; but as they are frequently induced in seasons and situations where that supposed specific matter or miasma cannot possibly exist, there is nothing more clear, the author observes, than that they are not produced by any such specific matter.

The opinion, that those diseases are the product of specific matter generated by vegetable putrefaction, appears to be rendered groundless from the disease varying in its type and symptoms in proportion to the extent and putridity of the soil, state of climate, season, and weather, with respect to heat, moisture, &c. and also in its not being contagious, the

reverse

reverse of which is the case with all known diseases that are derived from specific matter.

The author, having thus endeavoured to establish his doctrine, proceeds to the prophylaxis or means of prevention: these are, to introduce and increase the proportion of oxygenous gas in the superincumbent atmosphere, and to prevent its future abstraction by cutting off or diminishing the sources of putrefaction.

27. *Hints relative to the stimulant Effects of Camphor upon Vegetables.* By Benjamin Smith Barton, M. D.

The ingenious author put a piece of the woody stem of the tulip-tree, having one flower and two leaves, into eight ounces of water, with which he had triturated, for some time, one scruple of good camphor; the following effects were observed: viz. the two leaves in a short time became much elevated; the flower expanded very considerably; the stamina, or chives, receded from the pistillum; the flower-cup reflected back, and became extremely rigid and elastic; the internal surface of the petals of the flower perspired greatly; and the plant, for two days after, remained healthy and vigorous. In other similar experiments, Dr. Barton found camphor to act as a strong stimulant on plants, although they had previously been drooping and languid.

32. *Experiments and Observations on Land and Sea Air.* By Adam Seybert, M.D.

35. *Observations intended to favour a Supposition that the black Colour (as it is called) of the Negroes is derived from the Leprosy.* By Dr. Benjamin Rush.

This paper cannot fail to be interesting to physiologists: we shall therefore lay it before our readers in its original form.

"Dr. Smith, in his elegant and ingenious Essay upon the Variety of Colour and Figure in the Human Species, has derived it from four causes, viz. climate, diet, state of society, and diseases. I admit the Doctor's facts and reasonings, as far as he has extended them, in the fullest manner. I shall only add to them a few observations, which are intended to prove that the colour and figure of that part of our fellow-creatures who are known by the epithet of negroes are derived from a modification of that disease which is known by the name of leprosy.

"Many facts recorded by historians as well as physicians shew the influence of unwholesome diet in having produced the leprosy in the middle and northern parts of Europe, in the thirteenth and fourteenth centuries. The same cause, com-

bined with greater heat, more savage manners, and bilious fevers, probably produced this disease in the skin among the natives of Africa. But I will not rest the proofs of the colour and figure of the negroes being a leprosy simply upon its causes. Other circumstances make it much more probable. I shall briefly enumerate them.

" 1. The leprosy is accompanied in some instances with a black colour of the skin: of this I have met with a satisfactory proof in Dr. Thiery's Account of the Diseases of Asturia in Spain. I shall insert a translation of his own words upon this subject: 'There are,' says this excellent physician, 'above twenty hospitals for lepers in this province, and I have observed six species of the disorder. One of them, viz. the second, is called the black albaras of the Arabians. The skin becomes black, thick, and greasy. There are neither pustules, nor tubercles, nor scales, nor any thing out of the way on the skin. The body is not in the least emaciated; the breathing is a little difficult, and the countenance has some fierceness in it; they exhale perpetually a peculiar and disagreeable smell, which I can compare to nothing but the smell of a mortified limb.' (Observations de Physique et de Médecine faites en différens Lieux d'Espagne, vol. ii. p. 130.) This smell, mentioned by Dr. Thiery, continues with a small modification in the native African to this day.

" 2. The leprosy is described in the Old Testament, and by many ancient writers, as imparting a preternatural whiteness to the skin. Persons thus marked have lately received the name of Albanos. Solitary instances of this disease are often met with upon the Alps; but travellers tell us that it is one of the endemics of Java, Guinea, and Panama, where it is perpetuated through many generations. Mr. Hawkins, in his Travels into the interior Parts of Africa, has described the persons afflicted with this disease in the following words: 'They go entirely naked; their skin is white, but has not that animated appearance so perceptible in Europeans; it has a dull, deathlike, whitish cast, that conveys an idea more of sickness than of health. Their hair is red, or ashes-coloured yellowish wool; and their eyes are uniformly white in that part by which others are distinguished into the black, gray, and blue eyes. They are set deep in the head, and very commonly squint; for as their skin is deprived of the black mucous web, the distinguishing characteristic of these Africans, so their eyes are destitute of that black matter resembling a pigment, so universally found in people

of

'of all countries, and so useful in preventing the eye from 'being injured in cases of exposure to strong light.' (P. 116, 117.) This artless traveller does not stop here. The idea of this peculiarity in the colour and features of these people being a disease, and even its specific nature, did not escape him; hence he adds, 'These people, rendered unfortunate by 'the prejudices of their countrymen, are born of black pa-'rents; they have all the features of other inhabitants, but 'differ from them only in the above circumstances. The dif-'ference of colour cannot arise from the intercourse of whites 'and blacks, for the whites are very rarely among them; and 'the result of this union is well known to be the yellow co-'lour, or mulatto. Many of the natives assert that they are 'produced by the women being debauched in the woods by 'the large baboon, ourang-outang, and by that species in 'particular called the guaga-mooroos. No satisfactory dis-'covery has been made to account for such singular but not 'unfrequent phenomena in the species. It may perhaps be 'ascribed to disease, and that of the leprous kind, with more 'reason than to any other cause that has been yet assigned.' (P. 117, 118.) Mr. Bernardin concurs with Mr. Hawkins, in ascribing this morbid whiteness in the skins of the Africans wholly to the leprosy. (Studies of Nature, vol. ii. p. 2.) However opposed it may be to their morbid blackness, it is in strict conformity to the operations of nature in other diseases. The same state of malignant fever is often marked by opposite colours in the stools, by an opposite temperature of the skin, and by opposite states of the alimentary canal.

"The original connexion of the black colour of the negroes with the leprosy is further suggested by the following fact taken from Bougainville's Voyage round the World, (p. 294.) He tells us, that on an island in the Pacific Ocean, which he visited, the inhabitants were composed of negroes and mulattoes. They had thick lips, woolly hair, and were sometimes of a yellowish colour. They were short, ugly, ill-proportioned, and most of them infected with the leprosy; a circumstance from which he called the island they inhabit the Isle of Lepers.

"3. The leprosy sometimes appears with white and black spots blended together in every part of the body. A picture of a negro man in Virginia, in whom this mixture of white and black had taken place, has been happily preserved by Mr. Peale, in his museum.

"4. The leprosy induces a morbid insensibility in the nerves. In countries where the disease prevails, it is common

to

to say, that a person devoid of sensibility has no more feeling than a leper. This insensibility belongs in a peculiar manner to the negroes. Dr. Moseley says 'they are void of sensibi-'lity to a surprising degree; they sleep sound in every disease, 'nor does any mental disturbance ever keep them awake: 'they bear surgical operations much better than white people, 'and what would be a cause of insupportable pain to a white 'man, a negro would almost disregard. I have amputated 'the legs of many negroes, who have held the upper part of 'the limb themselves.' (Treatise upon tropical Diseases, p. 475.) This morbid insensibility in the negroes discovers itself further in the apathy with which they expose themselves to great heat, and the indifference with which they handle coals of fire.

"5. Lepers are remarkable for having strong venereal desires: this is universal among the negroes; hence their uncommon fruitfulness when they are not depressed by slavery; but even slavery in its worst state does not always subdue the venereal appetite; for, after whole days spent in hard labour in a hot sun, in the West Indies, the black men often walk five or six miles to comply with a venereal assignation.

"6. The big lip and flat nose, so universal among the negroes, are symptoms of the leprosy. I have more than once seen them in the Pennsylvania Hospital.

"7. The woolly heads of the negroes cannot be accounted for from climate, diet, state of society, or bilious diseases; for all those circumstances when combined have not produced it in the natives of Asia and America who inhabit similar latitudes. Wool is peculiar to the negro. Here the proofs of similarity in the symptoms of leprosy and in the peculiarities of the negro body, appear to fail; but there is a fact in the history of the leprosy which will probably throw some light upon this part of our subject. The trichoma, or plica polonica of the Poles, is a symptom of leprosy; this is evident not only from the causes which originally produced it, but from its symptoms, as described in a late publication by F. L. De la Fontaine. (Surgical and medical Treatises upon various Subjects respecting Poland.) From this fact it would seem that the leprosy had found its way to the covering of the head; and from the variety of its effects upon the skin, I see no difficulty in admitting, that it may as readily have produced wool upon the head of a negro as matted hair upon the head of the Poles.

"But how shall we account for the long duration of this colour

colour of the skin through so many generations, and even ages?—I answer: 1. That the leprosy is the most durable in its descent to posterity, and the most indestructible in its nature, of any disease we are acquainted with. In Iceland, Dr. Von Troil tells us, it often disappears in the second and third, and appears in the fourth generation. (Letters on Iceland, p. 122.) 2dly, No more happens here than what happens to many nations who are distinguished by a peculiarity of figure in any part of the body. Many of the inhabitants of the highlands of Scotland have the same red hair and the same high cheek bones which are ascribed to their ancestors by Tacitus, after the invasion of Britain. Even tumours in the throat in the Cretins who inhabit the Alps are transmitted from father to son through a long succession of generations. Madness and consumption in like manner are hereditary in many families; both of which occupy parts of the body much more liable to change, in successive generations, than the skin.

"Should it be objected to this theory, that the leprosy is an infectious disorder, but that no infectious quality exists in the skin of the negro, I would reply to such objection, by remarking in the first place, that the leprosy has in a great degree ceased to be infectious, more especially from contact; and secondly, that there are instances in which something like an infectious quality has appeared in the skin of a negro. A white woman, in North Carolina, not only acquired a dark colour, but several of the features of a negro, by marrying and living with a black husband. A similar instance of a change in the colour and features of a woman in Buck's county, in Pennsylvania, has been observed, and from a similar cause. In both these cases the women bore children by their black husbands.

"It is no objection to the theory I have attempted to establish, that the negroes are as healthy and long-lived as the white people. Local diseases of the skin seldom affect the general health of the body, or the duration of human life. Dr. Thiery remarks, that the itch, and even the leprosy, did not impair longevity in those people who lived near the sea-shore in the healthy climate of Galicia. (Vol. ii. p. 171.)

"The facts and principles which I have delivered lead to the following reflections:

"1. That all the claims of superiority of the whites over the blacks, on account of their colour, are founded alike in ignorance and inhumanity. If the colour of the negroes be

the effect of a disease, instead of inviting us to tyrannize over them, it should entitle them to a double portion of our humanity; for disease all over the world has always been the signal for immediate and universal compassion.

"2. The facts and principles which have been delivered should teach white people the necessity of keeping up that prejudice against such connexions with them as would tend to infect posterity with any portion of their disorder. This may be done upon the ground I have mentioned, without offering violence to humanity, or calling in question the sameness of descent, or natural equality of mankind.

"3. Is the colour of the negroes a disease? Then let science and humanity combine their efforts, and endeavour to discover a remedy for it. Nature has lately unfurled a banner upon this subject: she has begun spontaneous cures of this disease in several black people in this country. In a certain Henry Moss, who lately travelled through this city, and was exhibited as a show for money, the cure was nearly complete. The change from black to a natural white flesh colour began about five years ago, at the ends of his fingers, and has extended gradually over the greatest part of his body. The wool which formerly perforated the cuticle, has been changed into hair. No change in the diet, drink, dress, employments, or situation of this man had taken place previously to this change in his skin: but this fact does not militate against artificial attempts to dislodge the colour in negroes any more than the spontaneous cures of many other diseases militate against the use of medicine in the practice of physic. To direct our experiments upon this subject, I shall throw out the following facts:

"1. In Henry Moss, the colour was first discharged from the skin in those places on which there was most pressure from clothing, and most attrition from labour, as on the trunk of his body, and on his fingers. The destruction of the black colour was probably occasioned by the absorption of the colouring matter of the rete mucosum, or perhaps of the rete mucosum itself; for pressure and friction, it is well known, aid the absorbing action of the lymphatics in every part of the body. It is from the latter cause that the palms of the hands of negro women who spend their lives at a washing-tub are generally as fair as the palms of the hands in labouring white people.

"2. Depletion, whether by bleeding, purging, or abstinence, has been often observed to lessen the black colour in

negroes. The effects of the above remedies, in curing the common leprosy, satisfy me that they might be used with advantage in that state of leprosy which I conceive to exist in the skin of the negroes.

" 3. A similar change in the colour of the negroes, though of a more temporary nature, has often been observed in them from the influence of fear.

" 4. Dr. Beddoes tells us, that he has discharged the colour in the black wool of a negro, by infusing it in the oxygenated muriatic acid; and lessened it, by the same means, in the hand of a negro man. The land-cloud of Africa, called by the Portuguese *ferrino*, Mr. Hawkins tells us, has a peculiar action upon the negroes, in changing the black colour of their skins to a dusky gray. (P. 120, 121.) Its action is accompanied, he says, with an itching and prickling sensation upon every part of the body, which increases with the length of exposure to it, so as to be almost intolerable: it is probably air of the carbonic kind; for it uniformly extinguishes fire.

" 5. A citizen of Philadelphia, upon whose veracity I have perfect reliance, (Mr. Thomas Harrison,) assured me, that he had once seen the skin of one side of the cheek, inclining to the chin, and of part of the hand, in a negro boy, changed to a white colour by the juice of unripe peaches (of which he ate a large quantity every year,) falling, and resting frequently upon those parts of his body.

" To encourage attempts to cure this disease of the skin in negroes, let us recollect, that by succeeding in them we shall produce a large portion of happiness in the world. We shall, in the first place, destroy one of the arguments in favour of enslaving the negroes; for their colour has been supposed, by the ignorant, to mark them as objects of divine judgments, and, by the learned, to qualify them for labour in hot and unwholesome climates.

" Secondly, We shall add greatly to their happiness; for, however well they appear to be satisfied with their colour, there are many proofs of their preferring that of the white people.

" Thirdly, We shall render the belief of the whole human race being descended from one pair, easy and universal; and thereby not only add weight to the Christian revelation, but remove a material obstacle to the exercise of that universal benevolence which is inculcated by it."

42. *A Memoir on Amphibia.* By M. de Bouvois.

64. *An Inquiry into the comparative Effects of the Opium Officinarum, extracted from the Papaver somniferum, or white Poppy of Linnæus; and of that procured from the Lactuca sativa, or common cultivated Lettuce of the same Author.* By John Redman Coxe, M. D. an honorary Member of the Philadelphia Medical Society, and a senior Member of the Chemical Society of Philadelphia.

This paper is too valuable to be passed over, but does not admit of a satisfactory analysis. The general results of the author's various experiments shew that the opium extracted from the *lettuce* is greatly superior to that procured from poppies.

Some judgment, it is supposed, may be formed of the labour and expense attendant upon the cultivation of one acre of the poppy by the account given by Mr. Kerr: he says, "an acre yields, in the East Indies, 60lbs of opium, which, at 9*s.* sterling (two dollars) per lb, is 27*l.* an acre." But, at a moderate computation, it may be presumed, that one half of this sum is employed in the necessary expenses of ploughing, manuring, sowing, watering, and collecting, &c. &c.: say then that 13*l.* 10*s.* are clear gain; which must be allowed to be a large proportion. Now the poppy cannot be employed as an article of diet; whereas the lettuce, which grows there in the most luxuriant manner, will amply repay the labour and expense (which at most is trifling) attending its cultivation, by the sale of the supernumerary plants taken up at an early period for diet, long before the developement of the opium principle. Here then the very labour employed has the double advantage of thinning the plants, thereby rendering the remainder more perfect; whilst it collects for the market such as have arrived to sufficient maturity for the table.

The sale of these supernumerary plants would, the author conceives, at least repay the labour, &c. attending their cultivation; and if the rest yielded, per acre, only 60lbs of opium, double the profit would arise from its cultivation, above that of the poppy. The great abundance of the juice, however, and the luxuriance of the plant, render it highly probable that double that quantity, if not more, might be procured from the acre of ground.

The price of this valuable article of the materia medica leads him to hope that farmers and others will attend to the cultivation of the lettuce, in order to obviate one source of the annual expenditure of money from the United States; and,

as

as Dr. Crumpe observes, in his valuable Treatise upon Opium, "If any overplus remained after our own demands, a ready market would be found for it in the East Indies, where its consumption is very considerable, and price generally high."

The medical virtues of opium appear, from the experiments of several authors, to reside more particularly in the extractive principle. If this be certainly the case, the opium of the lettuce would prove far more valuable to the materia medica than the common opium; for, by the comparative experiments here recited, ten grains of extractive matter were taken up from one scruple of the lettuce opium, whilst only nine grains of the common opium were taken up from the same quantity: this, in a pound weight, will give a very decided advantage of six drachms, one scruple, four grains, to the lettuce opium, above the common; for in one pound of the lettuce opium, one half, or eight ounces, are extractive matter, whilst of the common opium only seven ounces, one scruple, one drachm, sixteen grains, are extract.

65. *Experiments and Observations on the Atmosphere of Marshes.* By Adam Seybert, M. D.

Air was obtained by agitating stagnant water over marshy grounds. The following experiments were then performed:

1. It burned when a candle was applied to it: the flame was blue. It did not explode when mixed with atmospheric air.

2. Agitated with lime-water, a copious white precipitate was formed.

3. Its bulk was considerably diminished by agitating it with lime-water.

4. Equal bulks of it and nitrous gas were introduced into an eudiometer tube, and a diminution of $\frac{2}{100}$ of their bulk was perceptible.

These experiments were frequently repeated, and the results were similar to the above-mentioned. The author thinks they warrant the following inferences:

1. That carbonic acid gas enters largely into the composition of the air examined.

2. That hydrogen gas is an ingredient in it.

3. That no oxygen gas was present.

Experiments with air collected from above marshy grounds produced the following results:

1. When agitated with lime-water, it afforded a precipitate, which was not so abundant as in the former experiments.

2. Mixed with nitrous air, its bulk was diminished to almost

almost as great a degree as the air in the yard of Dr. Seybert's lodgings.

3. Either pure or mixed with atmospheric air, it did not burn or explode when a candle was applied to it.

Hence it appears that the air obtained at the height of several feet above marshes,

1. Contains little or no hydrogen gas;

2. That the proportion of carbonic acid gas is pretty considerable; and,

3. What is of great consequence to be observed, a large quantity of oxygen gas enters into its composition.

The last-mentioned facts induce us to believe that the air above marshes is not considerably different in its properties from the common atmosphere in other situations, where animals respire with ease and enjoy perfect health, except the proportion of carbonic acid gas being greater: and this, the author is of opinion, diminishes in quantity as we ascend; for facts related by travellers who have visited the Grotto del Cane, and other similar places, prove that the gravity of this elastic fluid permits it to rise but to an inconsiderable height.

A series of experiments having been next made to ascertain what were the causes of these alterations in the air over marshes, they were found to arise chiefly from the putrefaction of animal and vegetable matters upon the marshy soil.

67. *An Essay on a new Method of treating the Effusion which collects under the Skull after Fractures of the Head.* By J. Devese, Officer of Health of the first Class in the French Armies.

In cases where blood or pus has been accumulated between the skull and dura mater, but which cannot be evacuated through a single perforation made for that purpose in the cranium, the author proposes to establish a communication between the collected matter and the external opening, by destroying the adhesions of the dura mater. To prove that this separation is not dangerous, Mr. Devese recites the following facts:

A young person, after the scarlet fever, had a violent pain, which fixed itself at the upper part of the head; every thing art could indicate was tried to effect a cure; bleeding, bathing, catharties, internal remedies, topicals of every kind, and blisters on the affected part, all had failed: when he was consulted, he advised the moxa, which was applied to the diseased part; and, though a plentiful suppuration followed, the pain seemed to increase, and for six months continued to augment; when he was again requested to give his advice. He prescribed

prescribed the trepan, which operation was immediately performed in the centre of the painful part: the opening made in the skull by this means gave vent to a quantity of pus of a greenish white colour: the pain ceased entirely, the patient was soon cured, and since has enjoyed a perfect state of health.

The preceding observation clearly shews that the dura mater had been long separated from the skull by the matter, and proves that the separation of this membrane is not dangerous.

It will be said, perhaps, that this separation did not produce any bad effect, because it took place gradually: the author's answer is, that an effusion occasioned by violent blows is suddenly formed, it forces the dura mater from the cranium with violence, and separates it sometimes to a great extent. It may be again objected, that nature, though acting hastily, manages in a manner art cannot imitate, in separating the dura mater from the skull. He opposes this objection by experience, and not argument. We shall therefore recite his facts:

"The 29th of March 1795, there was brought to the French hospital established in this city, a man about 38 years of age, of a middle size, and very robust constitution: he was comatose, his face inflated and discoloured with ecchymosis, his body covered with bruises and many wounds made with pointed instruments: those who brought him, told me he had been struck with an iron bar, which fractured his skull, and had been trepanned on the spot.

"After uncovering the head, it was washed and shaved; and I found the trepan had been applied on the upper part of the right parietal bone, about an inch from the coronal suture.

"I took away, with the lenticular knife, pieces of the internal plate, which wounded the dura mater, and enlarged the wounds in the direction of the fracture on which the trepan had been applied; it proceeded from the sagittal suture, and descended almost in a right line into the temporal region, at the upper part of which I bounded my incision, although the fracture extended lower: I observed another fracture in the upper and lower part of the same parietal, which had separated a piece of the bone, about three inches long and two wide; this piece was neither indented nor displaced, was behind and a little above the part trepanned: blood issued from the superior and posterior fractures.

"The next morning the patient was in the same state; insensibly voided his urine, and could not swallow. The dressing

ing was removed, much blood came from the opening by the trepan, and from the fractures.

"When I visited him in the evening he was comatose; but little blood came from the wound, nor did the pressure I made on the dura mater produce more. I introduced a blunt flexible probe under the skull, in the direction of the fracture, from whence the blood proceeded in the last dressing, and endeavoured to do the same by the fraeture which descended to the temporal region, at the distance of about a quarter of an inch; but was stopped by a sudden resistance, and it was at that moment reflection suggested the method I immediately put in practice.

"I presumed the comatose drowsiness which continued was occasioned by colleeted blood, and that it existed under one of the points of the fracture in the temporal region, because those effusions which had been formed under the other fractures were evaeuated in the preceding dressing.

"Had I followed the usual method, it is possible I might have made many openings before I had succeeded, or have failed finding it; consequently, after the reflection which suggested that the adhesion between the skull and the dura mater might be separated without inconvenience, I determined to separate the membrane by following the direction of the fracture; and proceeded to this operation with a silver spatula, very flexible, the extremities of which were rounded: I took the precaution to press it towards the bone, and to bend my instrument by degrees as I entered, to make it take the form of the part upon which I acted, and often drew it back, to measure on the outside the way it had made. At length, after having entered half an inch below the temporal scaly suture, the resistance suddenly ceased, and my instrument entered a hollow part: at the same moment the blood flowed in great abundance; when it ceased, I drew out the spatula, which was followed by a small quantity: the patient then began to move strongly, tried to rise, and talked without knowing what he said.

"The next morning I found him tied in his bed; this method was necessary, because he endeavoured to rise, as he said, to go and fight. More blood came away at the dressing. In the afternoon I found him better, he drank plentifully, and answered my questions: the next morning, being the fourth after the accident, he had perfectly recovered his senses; and from that time continued to mend. As his head had been much wounded, many abscesses were formed on the exterior; the

the last was on the piece of the parietal bone already spoken of; and as it had no connexion, and was vacilating, I easily took it away; the dura mater recovered, and followed the motion of the brain: the wound had suppurated, and the cicatrix was much advanced, when the patient went out the 28th of December.

"During the cure, the patient felt no pain in that part of the head where I had separated the dura mater; the cure of this trepan was neither longer or more difficult than usual, if we except the complication from the gatherings, which are foreign to the subject."

The author cites a case of the late Mr. Mareschal somewhat similar to this: but, says he, "Mr. M. trepanned his patient twelve times; I cured mine with one operation, and by a method which, to the best of my knowledge, had never before been tried."

72. *An Answer to Dr. Joseph Priestley's Considerations on the Doctrine of Phlogiston, and the Decomposition of Water; founded upon demonstrative Experiments.* By James Woodhouse, M.D. Professor of Chemistry in the University of Pennsylvania, &c.

74. *Memoir on the extraneous Fossils, denominated Mammoth Bones: principally designed to shew that they are the Remains of more than one Species of non-descript Animal.* By George Turner, Member of the A. P. S. Honorary and Corresponding Member of the Bath and West of England Society, &c.

76. *A Description of certain Bones deposited by the President in the Museum of the Society.* By C. Wistar, M.D. Adjunct Professor of Anatomy, &c. in the University of Pennsylvania.

ART. II. *Observations on the Utility of inoculating for the Variolæ Vaccinæ, or Cow-pox.* By EDWARD GARDNER, Author of Reflections on the high Price of Provisions, &c. Octavo. 29 pages. JOHNSON, London. 1801. Price 1s. 6d.

THE author begins with giving a short history of the small-pox; of its first appearance in Europe; of its fatality, on which account he justly calls it the severest scourge of human nature; of the improvements that have been made in the treatment of it, particularly by Sydenham; of the introduction of inoculation into this country by Lady Mary Wortley Montague; and the improvement made in that practice by the Suttons, by which its virulence was greatly abated, but

not destroyed; for, even under the best treatment, it sometimes proves fatal, or leaves behind it diseases equally, though not so speedily, destructive as itself. He then proceeds to give an account of the discovery of the cow-pox by Dr. Jenner, particularly of its being a certain preventive of the small-pox, and, like that, communicable by inoculation; that it is milder, rarely occasioning any considerable disturbance in the constitution, or producing pustules, except on the inoculated part; and lastly, which stamps its pre-eminence over the small-pox, that it is not communicable by the breath or effluvia. It is so extremely mild, that it may be resorted to by infants within a few days after their birth, or by women in every stage of their pregnancy. Although nothing new is added, by this little pamphlet, to the history of the disease, it may be read with advantage by persons not engaged in the practice of medicine; as containing short extracts from various essays on the subject, tending to justify the author in his prediction, "that the time must speedily arrive, when the inoculated cow-pox will be universally disseminated; and that it will universally expel its fatal predecessor, the small-pox, from the face of the earth."—A consummation, we will add, most devoutly to be wished for.

ART. III. *The Clinical Pharmacopœia; or general Principles of Practice and Prescription: arranged under three Heads, of Materia Medica, Classification, and extemporaneous Formulæ. Being the Principles and most approved Forms of Practice in Medicine, Surgery, Midwifery, and Children's Diseases. Intended as a Compend, or Pocket-book, for medical Practitioners.* By WILLIAM NISBET, M. D. Fellow of the Royal College of Surgeons of Edinburgh, one of the Surgeons to the Royal Infirmary; now of London. Duodecimo. 377 pages. JOHNSON, London. 1800. Price 5*s*.

THE writer of this work professes to relieve practitioners from the trouble of recollecting or thinking.

Such undertakings as these are easy in composition, demanding no more thought in the authors than their readers are expected or required to exert.

The nature and contents of the volume are given in a short introduction, which we here transcribe:

"I. The office of the physician consists in a proper application of medicine to the peculiar circumstances of disease.

"II.

" II. This application depends on a knowledge of the principles of prescription, which consist chiefly,

" 1. In an acquaintance with the qualities of medicines in general;

" 2. In the proper dose of the special one employed; and,

" 3. In its suitable combination for the purpose intended.

" III. The first is gained by the study of the materia medica; the leading articles of which are here first alphabetically arranged, and afterwards classed according to their leading qualities.

" The second is regulated by the particular age, and by the peculiar constitution of the person.

" IV. On the age, it is to be observed that a scale should be formed by every practitioner, as near as possible, of the exact proportion of any particular medicine which every period of life requires, so soon as it becomes a subject for the application of medicine.—Thus, if ʒj of any substance is a dose for an adult, the proportions for different ages may be rated with some exactness in the following order:

7 weeks old will take	$\frac{1}{15}$	equal to gr iv.
7 months . . .	$\frac{1}{12}$	= to gr v.
14 do.	$\frac{1}{8}$	= to gr vijß.
28 do.	$\frac{1}{3}$	= to gr xij.
$3\frac{1}{2}$ years . . .	$\frac{1}{4}$	= to gr xv.
5 do.	$\frac{1}{3}$	= to ℈j.
7 do.	$\frac{1}{2}$	= to ʒß.
14 do.	$\frac{2}{3}$	= to ℈ij.
21 do. . . .	full dose, or	ʒj.
63 do.	$\frac{1}{12}$	equal to gr lv.
77 do.	$\frac{5}{6}$	= to ℈ijß.

" V. In regard to the constitution, it is often attended with certain special peculiarities, both in respect to medicine in general, and also in respect to certain substances in particular. This, however, can only be known by experience, and not *à priori*, or on the first attendance on the patient, unless previously cautioned on this head, which should be always inquired into.

" VI. The third circumstance, or the suitable combinations of medicine, depend on the forming proper indications, drawn from the phenomena of disease: and these indications are detailed at large in the third part, or Extemporaneous Prescription."

The work is divided into three parts: the first contains the materia medica; the second, a classification of the materia medica, according to the qualities of the articles, as applied

internally or externally; the third, extemporaneous prescriptions, or the principal forms employed in the cure of diseases.

As specimens of the manner in which the whole is executed, we shall give a short extract from each part.

"MATERIA MEDICA.

" *Acidum nitrosum.*	Acid. nitros. dilut. ℥j, sæpe.
Nitrous acid.	*Proportions.*
Tonic, diuretic, antisyphilitic.	Acid. nitros. ℥j.
	Aq. distillat. ℔j.
	Sp. nitri dulc. gtt xx to ℥j.
	vel Ætheris nitrosi.
Acidum muriaticum.	Acid. muriat. dilut. ℥j, sæpe.
Muriatic acid.	*Proportions.*
Tonic, diuretic, antiseptic.	Acid. muriat. ℥j.
	Aq. distillat. ℥viij.
Aconitum.	Extract. aconit. gr ¼ to
Aconite, or blue	vel succ. spissat. gr iij.
Wolf's-bane.	Tinct. aconit. gtt v to xv.
Anodyne, acrid, deobstruent.	*Proportions.*
	Pulv. aconit. ℥j.
	Sp. vini ℥vj."

"CLASS XVI.

" *Anthelmintics.*	*Anthelmintica.*

" Anthelmintics are such substances as expel worms from the primæ viæ, generally dead, and prevent their future generation: and this they do either by a specific action, or as poisons to worms; by their lubricating quality, sheathing the parts against their influence; by their increasing the tone of the primæ viæ, thus preventing their generation; or, by their cathartic operation, procuring their expulsion.

Fœtids, as rue, tansy, &c.	Fœtida, ut Ruta, &c.
Bitter and acrid purgatives, as rhubarb, &c.	Amara et acria purgantia
Tin	Stannum
Coweech	Dolichos
Cabbage-tree	Geofræa
Male fern	Filix mas
Mercury, or æthiops mineral, &c.	Hydrargyrus, ut Æthiops mineral. Calomel, &c.
Lime water	Aqua calcis.

" *Extemporaneous Prescription.*—CLASS III.—*Cachectic Diseases* Consist in a depraved state of the whole, or a considerable part of the body, without fever (except in the first article) or nervous affection constituting a primary part.

" I. *Pu-*

" I. *Putrid Fever* (Typhus putrida)

Is marked by the same general symptoms as nervous fever; but, from the beginning, a great determination prevails to the head, denoted by flushings of the face, vibration of the temples, and a particular blood-shot glossy appearance which the eye assumes.

" In the beginning, to be treated by the antimonial solution and diaphoretics, as in N° 1, Class I.

" By acids and refrigerants, as in N° 18, Class I. and cold affusion, as directed in the other species of fever.

" When strength begins to fail, wine, bark, decoct. arnicæ, &c. as in N° 1, Class II.

" Occasional opiates also proper, as in ditto.

" Fixt air a popular remedy; as,

" *Forms.*	*Doses.*
℞ Sal. tartar. ʒj. Aq. font. ʒviij.	
℞ Sp. vitriol. ten. ʒij. Aq. font. ʒviij.	A table spoonful of each mixture to be mixed and taken in the act of effervescence.
℞ Tinct. C. Peruv. rosar. ā ʒj. Aq. font. ʒjv. Syr. s. ʒij. M.	Two table spoonfuls often.
℞ P. C. Peruv. ʒj. Mucilag. g. Arabic. ʒj. Tere simul, et adde Aq. rosar. ʒij. font. ʒxij. Syr. cois, ʒj. Elix. vitriol. ʒß. M.	Two table spoonfuls often."

The volume is printed in a very slovenly manner, and upon a coarse flimsy paper; though the price might, we think, have admitted of something better.

ART. IV. *An Essay on the malignant pestilential Fever introduced into the West Indian Islands from Boullam, on the Coast of Guinea, as it appeared in* 1793, 1794, 1795, *and* 1796. *Interspersed with Observations and Facts, tending to prove that the Epidemic existing at Philadelphia, New York, &c. was the same Fever introduced by Infection imported from the West India Islands: and illustrated by Evidences founded on the State of those Islands, and the Information of the most eminent*

eminent Practitioners residing on them. By C. CHISHOLM, M. D. and Inspector General of the Ordnance medical Department in the West Indies. The Second Edition, much enlarged. Two Volumes, Octavo. MAWMAN, London. 1801. Price 16*s*.

THE first edition of this work was published prior to the commencement of our labours; and from the very interesting nature of the subject, as well as from some peculiar opinions held by the author, concerning the origin, nature, and mode of treating the malignant and yellow fevers, it has been, we believe, very generally read. In the introduction, he gives a pleasing and picturesque description of the island of Grenada, of the natural productions, mode of living of the inhabitants, soil, water, atmosphere, &c. On all these subjects he speaks with the enthusiasm of an amateur. Every human want, he says, except those introduced by European luxury, is amply provided for by the natural productions of the island.

"The various species of the banana, of the potatoe, of the pea, of the bean, of the cassada, stand unrivalled in salubrity and native elegance of taste. To these may be added a variety of potherbs and greens unknown in Europe; and at least sixty kinds of fruit, chiefly natives of the country, of the most delicious favour and taste. To strengthen and give tone to the stomach, diminished by debilitating causes continually present, various peppers and grateful stimulating plants spontaneously present themselves. Is the traveller in the woods parched with heat and languishing for diluting drink, the kindly water-withe and wild pine are on every tree ready to assuage his thirst. Do the chilling northerly winds of winter check the perspiration and excite catarrhal complaints, many hundred plants well suited to remove them are every where furnished by Nature. Do fevers prevail, the same kind Provider has amply bestowed on us the means of relief. Are ever any afflicted with dysenteries, certain means of cure are found in every field, in every wood, and even climbing on the most steril rocks. No people are more afflicted with worms than the inhabitants of this country, nor are any more bountifully supplied by the hands of Nature with specifics against them. Ulcers, so obstinate and troublesome in other regions, however malignant, must here yield to the native detersives and incarnants of the country. The loathsome yaws are cured by simples. The venereal virus has its antidotes. The leprosy, the most dreadful of all diseases, is said to have its indigenous

remedy, known to few besides the aborigines of the islands. Although the inhabitants seldom require their aid, yet innumerable antiscorbutics are prepared by nature for the soldier and the mariner worn down by long voyages and the scurvy. Every poisonous herb or tree have their use, and are prevented from being mischievous by an adjoining antidote. Nay, the baneful effects of the manchineal may be prevented by the liberal and kind provision made by Nature. Does the imprudence or the ignorance of man lead him to the dangerous experience of the deadly juice of this alluring fruit, the sea is close at hand, into which he instinctively plunges for relief, or the white trumpet-flower tree extends its branches, and, intermingling them with those of the enemy, interposes antidotal power. Nor is this most poisonous of all plants without its medicinal use; for, by an easy and simple operation, its juice, in the state of vapour, extirpates those troublesome and obstinate fungi, the sequela of the yaws, called crabs and tubboes. In short, whatever can contribute to the ease and comfort of man, to his food, his drink, his medicine, his clothing, his dwelling, his utensils of husbandry, his household utensils, his bedding; to the construction of his boats and canoes, are here abundantly, and in most instances spontaneously produced. 'Ipsa quoque immunis 'rastroque intacta, nec ullis saucia vomeribus, per se dabat 'omnia tellus.' Nor is his food confined to the vegetable kingdom: horned cattle, sheep, goats, hogs, rabbits, agootees or Indian conies, and guanas; dunghill fowls, turkies, geese, ducks, Guinea fowls, and house pigeons, are at all times to be procured. At certain seasons, particularly in the autumnal months, there is not a scarcity of what may be called game, wood pigeons or ramiers, ring-tailed pigeons, snipes, teals, water-hens, wild ducks, plovers, blue and gray galdings, blackbirds, &c. But an inexhaustible supply of fish, of uncommon variety and goodness, may be throughout the whole year resorted to; all the rivers, bays, and sea teem with them; and, being easily procured, they constitute almost the only animal food of the lower classes of people. Black, red, and gray snappers, rock-fish, groopers, Spanish mackerel, king-fish, ten-pounder, porgie, barracuta, and pargue cavalloe, old-wife, sea-mullet, trunk, hog, bream, gar, ballahoo, jacks, and sprats, silver ballahoo, parrot, butter-fish, maid, flounder, soal, a kind of herring, sunfish, snook, carramaws, sting-ray and whip-ray, sennets, jew-fish (rare), yellow-tails, conger-eels, turtle of three kinds, and a multitude of shell-fish, are among the best of the sea-fish. River mullet, mud-fish, crapaud or river

river toad-fish, silver-eel, and innumerable cray-fish, the most esteemed of the fresh water fish.

" It is not, therefore, surprising, that foreign luxuries too liberally used should shorten the lives of one description of inhabitants; whilst another, confining themselves to the wholesome indigenous aliment of the country, with occasionally the addition of the least injurious of the European delicacies, live to an age uncommon even in the temperate regions of the old continent. The old monastic rhyme is in all countries the best rule of diet:

> ' Pone gulæ metas, ut sit tibi longior ætas;
> ' Ut medicus fatur, parcus de morte levatur.'

But it is more especially so here, where great efforts are made by nature in the assimilation of the European constitution to the tropic climate in the first instance; and where diseases, mild among the indigenæ, or the assimilated country, become fatal to the imprudent stranger. In fact, it is this circumstance which has given rise in Europe to the prevailing idea of the unhealthfulness of these islands, and of Grenada in particular; for the climate of Grenada, notwithstanding the variable temperature, occasioned by the irregularity of its surface, and the moisture of its atmosphere, is certainly healthy, compared to other countries in the same latitude; and would prove so to every description of its inhabitants, were they all equally temperate, and equally careful to avoid those excesses in diet which in all climates are dangerous, and often fatal. To prove this, no more is necessary, than to attend to the uninterrupted health and great age of many of the French and Creole inhabitants of both sexes. Eighty, ninety, and an hundred years is by no means an uncommon age among these: and females are in general longer lived than males. One instance has occurred, of life being lengthened out to the 127th year; an age not very far short of the famed instances of longevity of our own country; and, if the climates are considered, certainly more extraordinary. An anecdote lately related to me of this aged person, is uncommonly singular. Mr. Forthon lived on a coffee estate, in that part of the parish of St. George, called Foret Noire, or the Black Forest, about five miles from town. The gentleman who related the anecdote to me, with another, visited this old gentleman two or three years before his death. They found him employed in having a negro wench flogged: and, as he was blind, he was led to the place where the culprit lay, in order,

order, by feeling, to know whether the punishment had been properly inflicted or not. Being satisfied in this point, he returned with a firm steady step to his seat. The cause of this punishment was still more extraordinary: a Mr. Maly, Mr. Forthon's grandson-in-law, assured my informant, that Forthon punished the wench, who acted as a kind of housekeeper to him, for refusing to admit of his embraces. The French and Creole inhabitants are never afflicted with the fatal topical inflammation, often epidemic among the English and negroes; nor do fevers of a bad kind ever appear among them. Their strength continues as unimpaired as their constitutions; so that it is no uncommon thing to see a very old Frenchman walk and ride with all the firmness and activity of youth."

In a country thus favoured, it cannot be supposed that diseases so destructive and fatal as the malignant, pestilential, and yellow fevers, against which no remedies were to be found in the various productions of the soil, could be indigenous. Accordingly, the author contends, as he had informed us in the first edition, and as he announces in the title to this, it was taken thither from Boullam, on the coast of Guinea, in one of the vessels of the Boullam association. This opinion has been strongly controverted; but, the author thinks, unfairly, and from interested motives.

"The opposition which I have had, and have to contend with, in my endeavour to impress the truth of my sentiments on the public mind, relative to the origin and cause of the propagation of the pestilential infection which has characterized the late direful epidemic; and to the mode of treatment which I, as well as every unprejudiced practitioner in the West India islands, have found the only successful one, has proceeded from the agents of the Bulama association in the first instance, and from the medical staff of the armies acting in the West Indies subsequent to the year 1795. The attempts at refutation of the strong facts which have occurred at Grenada, by the agents of the Bulama association, are similar to the assertions made by the writers for the Levant Company, against the importation of infection into Great Britain immediately from Turkey. The first have imagined that their colonies on the coast of Africa might be injured; and the latter had fears of their trade suffering: we see, therefore, in both, interest overleaping every obstacle, and shutting the door against truth. The conduct of the gentlemen composing the medical staff cannot be so obviously accounted for."

What interest, after all, the Bulama association could have

in opposing an investigation into the origin of this fever, is by no means obvious to unprejudiced persons. If the disease be an epidemic of that country, it will be impossible to keep it a secret; but it does not appear that, either while it was committing such dreadful ravages in almost every part of the western hemisphere, or since that time, any traces of it were to be found at Boullam, nor, that we have heard, in any place in the vicinity of that settlement. This is not intended as an argument against the opinion the author maintains, that the yellow fever is contagious, and that it was originally transported to Grenada in the Hankey, one of the Bulama association ships, and from thence disseminated to all the islands, and to the continent of America; but simply to assert the freedom of inquiry, which the author seems inclined to preclude, by treating his opponents with contempt and illiberality. And this conduct he holds, not only to those who deny the importation of the disease from the coast of Guinea, but to all those also who do not admit the almost infallible efficacy of mercury in the cure of this fever, if vigorously and strenuously persisted in. The new additional observations and arguments in support of these positions have extended the work to more than double the bulk of the first edition.

"With these views," the author says, "and to place the subject in a still more clear light, I have extended the work very considerably; and endeavoured by new facts, and reasoning resulting from the consideration of them, to impress the necessity which exists for decision, dispassionate examination, and unwearied attention in the pursuit of the mercurial mode of treatment, which the almost universal suffrage of medical gentlemen who have practised in this pestilential scourge within the tropics, has proved to be the most efficacious. It would have been with heart-felt satisfaction, could I have stated to you, that the West India navy and armies, since the publication of my Essay, had benefited by the practice recommended in that work. As a British subject, and as a friend to humanity, I most sincerely regret they have not. But what has been the cause? Not the inefficacy of the mercurial treatment—Alas! no—*but the baneful operation of determined prejudice; the bias of unjustifiable authority; the imbecility of weak or inexperienced minds, dreading the adoption of measures, which, although necessary for the preservation of the unhappy sick placed under their charge, militated against the opinions of misplaced and overweening power.* Had a judicious and decisive practice been pursued, would more than twelve

thousand of our countrymen have perished in the short space of two years?—Without enlarging on this question, I shall leave it to your serious consideration."

Declamation similar to this, and reflections still more pointed on the conduct of those physicians or surgeons who are not converts to his doctrines, are met with in every part of the volumes. But surely, with a mind so irritated, and so strongly prejudiced in favour of its opinions, little of that *dispassionate examination* the author recommends, and which is so necessary to develope and bring forward the truth in questions so complicated, can be expected. On the other hand, though we were to suppose, that gentlemen might be found, either so careless, or so void of humanity, as to suffer myriads of their fellow-creatures to perish, without using the means of preserving them that were in their hands; yet a regard to fame, interest, and even self-preservation, would have compelled persons to have employed them. For our parts, we cannot help being of opinion, that the author may be deceived, both as to the origin of the disease, and as to the efficacy or almost infallibility of his mode of treating it. In respect to the first, it seems clear that the fever which broke out in the Hankey, was the gaol or hospital fever; all the circumstances producing that fever, in its very worst form, were present: the ship was so crowded with passengers that it was impossible to pay that attention to cleanliness and ventilation which was necessary to keep them in health. In that situation it remained stationed for some months off the coast of Guinea, in the worst season of the year, no provision having been made for landing the passengers. When the ship was afterwards released, what remained of the crew were still unhealthy, and in that state it went to Grenada.

Admitting a portion of the inhabitants of Grenada, such as had the most intimate commerce with the persons on board this vessel, to have received the infection, they would have had the gaol or hospital fever. But this would never have become general through the island, still less through all the islands, and over half the continent of America. The precautions that were early taken, to prevent further commerce with the sick, would have infallibly prevented its being widely disseminated. But no precautions were found sufficient to stop the progress of the yellow fever, which, by the confession of our author, as well as of all writers on the subject, was a disease distinct, and very different from the gaol or hospital fever, and certainly depended on some peculiar con-

stitution of the atmosphere. In respect to the superiority of the mercurial treatment over every other mode, if the success had been so remarkable as the author conceives, and as many of the physicians and surgeons in different parts had recourse to it as well as the author, the remainder must of necessity have adopted it; or those who continued to reject it, after such strong proofs of its superiority, would have fallen into disrepute and neglect. That the practice was pushed to the very utmost extent the author could reasonably desire, we have his own authority for believing; as some of the gentlemen on whom he bestows the most exuberant praise, administered calomel to the amount of a thousand or eleven hundred grains, others more than two ounces, to a single patient. "Dr. Porter, of Tortola," he says, "made use of calomel to a very great extent; and in one instance gave as far as eleven hundred grains, without the medicine producing any visible effect." His patient died; and in the next page we are told, that "Dr. Saunderson employed calomel very liberally, but without the expected success. In one case he gave a thousand grains, without perceiving any sensible effect." We are not told the result of this case, but may reasonably presume the patient died. This gentleman found, that by adding jalap to the calomel, the medicine produced the most salutary effect; "not, however," he adds, "so much by the alvine evacuation which thereby took place, as by something stimulant in the mixture, which more readily excited the action of the calomel on the salivary glands;" and yet as purges with jalap and calomel frequently repeated were found by Dr. Rush more efficacious than any other medicines, and even, as he thought, almost specific and infallible in the cure of the yellow fever at Philadelphia; and as Mr. Bryce found the same medicine of equal efficacy on board the Busbridge East Indiaman, we cannot help thinking that the alvine evacuation was of considerable importance in promoting the cure.

(To be concluded next month.)

ART. V. *Mémoires de la Société Médicale d'Emulation, Tome II.*

(Concluded from Vol. V. Page 341.)

THE first paper in the SURGICAL DEPARTMENT of this work contains

A Description of a new Trepan. By Xav. Bichat.

English readers will not need to be informed, that the instrument

strument called a *trepan*, in which the crown or head was affixed to a frame, like a carpenter's wimble, is now entirely laid aside in this country; and that another, of a more simple construction, named a *trephine*, (invented long ago by our countryman Woodall,) has been substituted in its stead. The ordinary trepan, M. Bichat observes, is composed of fourteen pieces: he here gives an engraving of one, which is undoubtedly less complex and more eligible; but, we think, it is still much inferior to the trephine, both in its construction and application. It will therefore be unnecessary for us to dwell longer on the present article.

Reflections and practical Observations on the Panaris, or Whitloe. By P. Sue, the elder.

Systematic writers on surgery, from the time of Hippocrates to this day, have treated of the panaris; and have mentioned how serious the symptoms of this disease are, on some occasions. Guido de Cauliaco, John de Vigo, and others, have even spoken of it as being frequently fatal in its consequences. But authors do not agree in their descriptions of the complaint, nor in the enumeration of its several species.

Gouey divides it into five species; most writers, however, into four only: *Heister* reckons three; *Astruc* and *Juncker* admit but two: a modern author, *Franc. Imbert*, allows of eight; whereas *Dionis*, on the other hand, pretends there is but one. The greatest masters of their art, *La Faye*, *Garengeot*, *Le Dran*, *Hévin*, *Louis*, *Heister*, *Platner*, *Plenck*, &c. agree that certain nosological distinctions ought to be received.

The author has prosecuted his remarks on this subject to the extent of twenty-five pages. We shall endeavour to give a compressed account of the most interesting parts of his paper.

In the earliest period of the whitloe, emollient and anodyne applications are commonly had recourse to; but these, M. Sue thinks, are very hurtful by augmenting the bulk and heat of the tumour. Discutient remedies, he supposes, are better calculated to arrest the progress of the complaint in its early stage; and afterwards, if these do not succeed, he recommends the free application of a caustic to the bottom, so as to destroy all the parts which are painfully distended. Incisions have been sometimes repeated, and made even down to the bone, without affording relief to the patient; indeed the symptoms will be aggravated by this treatment, unless the centre of the abscess be exposed.

To illustrate and confirm his opinions, the author details several cases; all of which afford much practical instruction.

He

He properly observes, that general rules only can be laid down for the treatment of this disease by incision. The pain may be severe, lancinating, and profound, but a very small quantity of pus exists in the finger affected: while in such cases, a simple puncture may suffice for its evacuation, provided it descend to the focus of the abscess. When the matter is seated, not in the fascia of a tendon, but in the surrounding parts, he prefers a longitudinal incision. If the pus distends the hand, and diffuses itself under the annular ligament, it may be requisite to divide the fascia and the tendon; but it is first worth while to try the effect of pouring in some hot oil of turpentine, (as practised by *Ambr. Paré*, in the case of Charles IX.) to destroy the sensibility of the parts, in hopes that the use of the tendon may thus be preserved, and its division superseded. Some cases occur, in which one or more phalanges of the finger must inevitably be destroyed by the disease: it would, when this is foreseen, be better to amputate the morbid parts than to trust merely to our incisions; as the member cannot, at any rate, be preserved entire and serviceable. The dressings, after the excision of the finger, should consist of balsams and gum-resinous substances; but unctuous applications would be highly improper. An attempt should also be daily made to bend the remaining joints of the finger, to prevent anchylosis.

A Memoir on the Fracture of the scapular Extremity of the Clavicle. By Xav. Bichat.

Fractures of the scapular extremity of the clavicle often pass undetected. Their union is generally so equal, that no person would discover the injury to have happened. M. Bichat here examines the ordinary methods employed for preserving the broken bone in its natural situation; and concludes, that the most suitable apparatus is this: 1. A cushion of uniform thickness, intended merely to serve as a support for the arm, but not to raise it at a distance from the body: 2. A roller to fix this cushion upon the trunk, and afterwards, by another turn, to confine the humerus upon it: 3. A sling, to retain the fore-arm in an immoveable position.

Considerations and Observations on Wounds of the Head. By B. Giraud.

The author reduces the subject of his inquiry to the following questions:

1. Are fractions of the cranium usually accompanied with an effusion of blood?

2. Are there any certain symptoms by which their existence and situation may be detected?

3. Can

3. Can the effusions of blood consequent on wounds of the head produce all those effects which have been attributed to them?

4. Is it possible, during the present state of surgical knowledge, to prescribe a successful mode of treatment for wounds of the head?

The first three questions are answered by our author in the negative.

With respect to the plan of treatment, M. Giraud is decidedly of opinion, even when effusions can be distinctly ascertained to exist, that the operation of trepanning may be generally dispensed with; and that success may be often obtained from the use of other means, both internal and external. He particularly advises practitioners at large hospitals to be cautious of bleeding their patients, lest they become afterwards much debilitated. Purgatives, in his judgment, are especially to be had recourse to; sometimes premising an emetic; and likewise to cover the injured part of the cranium with emollient poultices. It is also suggested as proper, to keep up a discharge from the integuments, as well as to set free the pericranium from its attachments. The author thinks many of the advantages which are said to arise from the trepan, ought to be attributed to the incisions made at the time of its application: though sometimes he conceives it to be actually hurtful, by exposing the *dura mater*, and producing suppurations or sloughing. At any rate, M. Giraud concludes that the trepan is generally improper to be used at large hospitals, where contagious effluvia are likely to disorder the patient.

Description of a new Mode of applying Ligatures to Polypi. By Xav. Bichat.

This description is illustrated by an engraving, without consulting which our readers will not be able to enter into the views of the author.

PHYSIOLOGY.

Memoir on the synovial Membrane of the Joints. By the same Author.

The object the author has in view in this inquiry, is to determine whether the synovia, secreted by glands situated in or near the joints, transudes through the ends of the bones, as the marrow is found to do in dead subjects, or exhales through the orifices of the lymphatics, in the manner the lymph exhales into the cavity of the thorax, abdomen, &c. After examining the arguments by which each of these opinions have been supported and defended, he determines in favour of the latter

latter mode, by exhalation. There is a striking analogy, the author observes, between the fluids found in the other cavities and that found in the joints, although differing in some points; they are destined to perform the same functions, viz. to lubricate the parts, and prevent their being injured by friction. When the membrane lining these cavities is inflamed, the exhalation is diminished or ceases, whence adhesion of the lungs to the pleura, or of the abdominal viscera to each other; and if in the joints, anchylosis, or union of the ends of the bones, take place. When the absorbents in any of the cavities cease to perform their office, dropsy of the part ensues; to which the cavities of the joints are in like manner liable. The author, pursuing his inquiry, finds the synovial membrane resembling, in almost every point, the pleura, &c. whence there can be no doubt, he thinks, that they perform the same office.

Dissertation on the different Membranes, and the Resemblance they bear to each other in their Structure. By the same.

The author here attempts to form a classification of the membranes; but he acknowledges we are not furnished with sufficient data to complete that work.

Dissertation in Answer to a Prize Question, proposed by M. Lynch; Correspondent Member of the Society of Emulation:—What are the sympathetic Influences the different Organs of the Body possess over each other? By Ch. Créve.

This long Dissertation (extending to 84 pages) is written in Latin, and appears to be a work of much labour and ingenuity, but cannot be abridged so as to bring it within the space we are able to allow for articles merely speculative.

Observations on certain Imperfections in the Conformation of the Organs of Generation in two Women. By R. Cailliot and M. Renauldin.

A woman, 21 years of age, who had in general enjoyed a good state of health, but had never menstruated, nor felt any inconvenience for want of that evacuation, being about to marry, consulted M. Boyer, one of the professors of the School of Medicine at Paris, on that subject. On examining the parts, he found, instead of the vagina, a small canal, about an inch in length, capable of admitting the end of a sound. On the most careful investigation per anum, no uterus could be found. Morgagni, in his sixteenth chapter, says, he had been several times consulted by women who had never menstruated, and who, in the place of the vagina, had similar small cavities; but it never occurred to him to dissect any

subjects

subjects in which the uterus was wanting. Columbus, however, saw two subjects of that kind.

The second observation relates to the case of a woman, 25 years of age, who had never menstruated, but who laboured under various diseases,—probably the consequences of suppressed menses. On examining the parts, her vagina was found closed by a thick membrane, which was divided. No menstrual discharge following, the surgeons advised her to admit the embraces of a man, as a probable means of producing the menses, relieving her from her deafness, and from a train of nervous diseases with which she was afflicted!

Of the next and last memoir in the volume, pertaining to the science of medicine, we shall only give the title.

On the Relation that exists between Organs formed with Symmetry, or Resemblance to each other, as the Eyes, Ears, Hands, &c. and those formed irregularly, as the Spleen, Liver, &c. By Xav. Bichat.

ART. VI. *Practical Observations on the Inoculation of the Cow-pox; to which is prefixed a compendious History of that Disease, and of its Introduction as a Preventive of the Small-pox. Designed principally to promote a Knowledge of the Subject amongst those who have not hitherto attended to it.* By JOHN ADDINGTON, Surgeon. Octavo. 50 pages. JOHNSON, London. 1801. Price 1*s.* 6*d.*

THE author had nearly finished this little work before Mr. Aikin's Observations, conducted on a similar plan, appeared; but he justly observes, as he had not confined himself to merely relating the results of the observations of others, but had added accounts of such as had fallen under his own notice, he did not think it proper to suppress what he had done. In fact, his own observations, which appear to have been collected with faithfulness and judgment, form a valuable part of the publication, in which he has contrived to concentrate, in a neat and intelligible manner, a pretty accurate account of every thing material that is known on the subject.

ART. VII. *Remarks on the Situation of the Poor in the Metropolis, as contributing to the Progress of contagious Diseases; with a Plan for the Institution of Houses of Recovery, for Persons infected by Fever.* Published by the Desire, and at the Expense

of the SOCIETY FOR BETTERING THE CONDITION OF THE POOR. Octavo, 47 pages, HATCHARD, London. 1801. Price 1s.

THIS useful work, by Dr. T. A. Murray, one of the physicians to the Public Dispensary, is recommended to the attention of the public by the benevolent Society, who are so laudably exerting themselves in improving the condition of the poor.

The author begins with giving a dreadful but true account, we fear, of the habitations of a great part of the poor in this metropolis: "In a large proportion," he says, "of the dwellings of the poor, a house contains as many families as rooms: on the ground-floor resides almost universally the master of the house, with his family, which, if pretty numerous, sometimes occupies the whole of that floor; if not, the back room is tenanted by another family. This apartment is in many instances of a size scarcely more than sufficient to admit of a bed, with space for a person to pass it, and so much as is necessary for a fire-place. The rooms which are in the front of the house are usually larger, but they are often occupied by families more than proportionally numerous.

"But although the accommodations in the middle and upper part of the house are extremely uncomfortable, they are in every respect preferable to those in the lowest apartment or cellar, where darkness, dirt, and stagnant air combine to augment all the evils resulting from such a situation.

"The state of the windows requires to be particularly noticed, as being intimately connected with the present subject. Many of these cannot be opened without admitting air apparently more noxious, certainly not less offensive, than that already contained in the room; in other instances, the sashes have frequently been rendered by age or accident immoveable; wood or paper has been substituted for broken panes of glass; and every crevice is so carefully stuffed by woollen rags or some other filthy substance, that as means of admitting fresh air the windows are often totally useless."

If to this we add, that these habitations are generally situated in narrow streets, in courts, or alleys, sheltered from the wind, and almost impervious to the rays of the sun, we shall not wonder that they frequently become seminaries to fevers of the most infectious and pestilential kinds; and that vast numbers of the inhabitants are annually swept off, whose lives might be saved were they to dwell in less crowded, more airy, and salubrious

lubrious situations. Large and extended as London now is, by the addition of almost innumerable streets and houses, at each of its extremities, the increase seems scarce equal to the increase of its inhabitants. Many and great improvements have been made in the streets of London and Westminster within the last thirty years, and numerous openings have been cut, or those before existing enlarged. This, as far as it has gone, has certainly assisted in ventilating the cities, and in making them more healthy; to which also the present mode of building, enjoined by the Legislature, with straight, upright fronts, without projections, has contributed. To these wise regulations and precautions we may doubtless attribute it, that fevers originating in any of the numerous, crowded, and close places that still remain, are seldom extended much beyond the places where they take their birth; but even so confined, the number of victims is very great; amounting, probably, to several thousands annually. To put a stop to this mortality, or at least to diminish the number of the victims, is the object of the Plan proposed by the little work before us. It consists in taking, or erecting houses at each of the extremities of London and Westminster, for the reception of persons destitute of accommodations, immediately on their being seized with fever: in cleansing and whitewashing the apartments from which the diseased are taken: in being empowered to burn and destroy the bedding, curtains, &c. where found to be necessary, and replacing them with such as are clean, and less likely to retain infection. It is a great advantage to this wise and benevolent Plan, that it has been adopted at Manchester, at the suggestion, and under the direction of Dr. Ferriar; and has there been productive of the most singular advantage, having occasioned a very considerable diminution in the annual amount of deaths in that populous town. We need not say after this, that we heartily approve the plan; and have no doubt, as soon as it shall be publicly known, and subscriptions are set on foot for its support, that it will meet with general encouragement.

ART. VIII. Professor CUVIER's *Leçons d'Anatomie comparée.*

(Concluded from Vol. V. Page 355.)

THE description of the organs of sensation, with which the second volume commences, is preceded by an examination of the head, considered as the receptacle of the principal organs

of sense. The author treats of the cranium, of its proportions with the face, especially in the vertical section; of the remarkable diminutions of the facial angle, as examined in the various gradations of animals. He then considers separately the two divisions of the head; in the cranium, the number, connexion, and form of the bones, the projections and cavities in its interior part, the examination of which indicates pretty accurately, *à priori*, what shall be the configuration of the medullary organ, which they are destined to contain: in the face, the number, figure, and disposition of the bones, the *fossæ*, which are observed in them, particularly the nasal, orbitary, and temporal, the different foramina and fissures with which they are perforated, and which transmit either nerves from the internal to the external parts, or vessels from the external to the internal. It is interesting to consider the infinite diversities of form and dimensions which all these parts exhibit, as examined in the mammalia, birds, reptiles, and fishes.

From these observations on the organs essential to sensation, a transition is made to the description of the nervous system. First are examined its organization in general, the relations which subsist between its different divisions, the texture of the brain, the spinal marrow, the nerves and ganglions, their origin and termination. This system is next considered in the state of action, as propagating or receiving impressions, as the seat of the different sympathies, and the cause of the different intellectual phenomena; finally, it is compared in the different classes of animals, where it is uniformly found to present one constant part, namely, the tubercle, which in man is represented by the cerebellum; whilst, with respect to its other parts, it varies *ad infinitum*, losing several of its ramifications in the animals without vertebræ, &c.

The author commences his examination of the nervous system in particular, with the consideration of the human brain, which he describes in a detailed manner, and according to a method different from that followed by other anatomists. He next proceeds to examine the cerebrum of the mammalia, its proportion to the whole body, to the cerebellum and the medulla oblongata: its form, its circumvolutions, the formation of its internal parts, the disposition of its base, and the origin of the nerves, are successively investigated. He then turns his attention to the same particulars in birds, reptiles, and fishes, and to the numerous peculiarities belonging to these classes.

These descriptions lead to a recapitulation of the characters

propet to the brain of the four classes of animals. Too great stress cannot be laid on the importance of these general observations; which present, under one comprehensive view, all the grand differences of organic structure, that separate the various species of animals from each other; and afford marks of distinction and classification, far more real than those derived from their external configuration.

The account of the brain concludes with the history of its integuments and vessels, of the spinal marrow, the organs which surround it, and the vessels contained in, and proceeding from those parts.

The description of the nerves in the animals that possess vertebræ, is drawn up with a degree of accuracy and circumstantiality, which renders this part of the work almost entirely new in its kind. Each nerve is particularly examined in the mammalia, the birds, the reptiles, and the fishes. Nothing can be more curious, nor more fertile in inferences, than the manner in which each nerve varies, and receives modifications and dispositions, different from those appertaining to the correspondent nerve in the human species; which is always considered as its primitive type, according as the organs into which it enters are themselves differently modified. This is principally observable in the par vagum, in the diaphragmatic nerve, in the nerves of the thoracic organs, &c. according to the different configurations of the lungs, stomach, members, &c.

An accurate description of the grand sympathetic nerve in all the different classes, with notice of the remarkable differences which characterize it in each, concludes the history of the nervous system in the animals with vertebræ.

With those species that do not possess vertebræ, it was necessary, as in the description of the organs of sensation, to have recourse to frequent monographies, on account of the immense differences which distinguish each species from the rest; but in every one, these monographies are sufficient to give us an idea of the nervous organization of the family to which the individual belongs.

The history of the nervous system in general, concludes with observations on those animals that seem to be destitute of this system; many of which, however, have something analogous to it, as the star-fish, the spinunculus, &c.; whilst others, such as the polypus, &c. consist of a mere pulpy matter, of homogeneous texture, and in which no traces of organization can be distinguished.

The treatise on the senses is not less interesting than that

on

on the nerves, on account of the novelty of the descriptions, the philosophical comparisons which they suggest, and their undoubted tendency to illustrate the functions of the human species.

In treating of the eye, M. Cuvier first presents us with a general idea of vision; next, he considers the ball of the eye in the different tribes of animals, with regard to number, size, position, direction, general form, the proportion of its different divisions; its coats, the sclerotica, the conjunctiva, the choroidea and its appendages; the diversities which it presents in the different classes of animals; the iris and pupil, and their motions; the retina, the manner in which the optic nerve enters the eye in order to form it, in the four classes of animals with red blood, and afterwards in the cuttle-fish in particular; the humours of the eye, their variations with respect to quantity and configuration, and the absence of the aqueous humour in some species of animals. The accessory parts which surround the eye, as the eyelids, &c. the different glands which supply it with the requisite moisture, the different proportions of these organs, their absence, &c.; finally, the organs of vision in the insects and crustacea, terminate the description of the parts by the concurrence of which this function is performed.

The account of the sense of hearing commences with a physiological view of this function, which receives much elucidation from comparative anatomy. The author then goes on to consider the internal organs, which he examines in an order inverse of that which he has hitherto followed; beginning with the most simple, he proceeds to the most complicated organization, demonstrating the different parts of which the human ear is composed, as they are successively superadded one to the other, from the crustacea up to the mammalia. In this manner, he investigates in succession the membranous labyrinth, the osseous labyrinth, the cavity of the tympanum and its appendages, the membrane of that name and its osseous frame, the bones and the muscles by which it is put in motion. The description of the internal organs is followed by that of the external. The osseous and cartilaginous meatus; the concha, with its diversities of form in the different species of animals; its muscles, which present equal diversities in man and the mammalia; and the distribution of the nerves throughout the whole ear, are successively examined.

The article concerning the touch comprehends the organization of the skin, its different layers, its muscles, glands, &c.; the

the peculiar form of the fingers relative to this function; the parts which in other animals supply the place of the fingers, as the trunk of the elephant, the upper lip of the rhinoceros, the moveable, long, and pointed snout of the hog, the mole, and shrew-mouse, the comb of the cock, the tentacula of insects, &c.; finally, the different substances which defend the organs of touch, as hair, feathers, horns, nails, scales; the insensible parts of the animals without vertebræ; substances, which could not be anatomically arranged in any other place, though several of them have no very direct relation to the sense of touch.

The treatise respecting the sense of smelling commences with various general observations on this function: the author then proceeds to examine the osseous cavity, in which terminate the sinuses that present such striking differences of structure in man and the mammalia, and in which those projecting laminæ are found that in some animals so greatly increase their extent, but in others is very limited; the pituitary membrane, the olfactory nerve, its differences in the four grand classes of animals with vertebræ; the accessory parts which aid the sense of smelling, the external nares, the organs with which the testaceous animals throw out water, the mode in which the perception of smells is produced in the animals without vertebræ: all these subjects successively engage the attention of the author, who concludes this first and interesting part of his work, with the history of the sense of taste, the description of the tongue and its various integuments, in the mammalia, birds, reptiles, and fishes; and the distribution of its nerves, &c. &c. &c.

ART. IX. *Asthenology: or, the Art of preserving feeble Life; and of supporting the Constitution under the Influence of incurable Diseases.* By CHRISTIAN AUGUSTUS STRUVE, M. D. Translated from the German by WILLIAM JOHNSTON. Octavo. 441 pages. MURRAY and HIGHLEY, London. 1801. Price 8*s*.

IN a well-written Introduction the author states what is proposed by this art. It is not to restore health and strength, but simply to prolong existence. Though that be the scope and end of the art, yet it will sometimes happen, that by preserving life beyond a certain period of a disease, or for a certain time, opportunity may be given for the powers of the constitution

constitution to rally, and an entire restoration of health and strength may be unexpectedly effected.

"The field of the medical art requires a slow Fabius as well as an impetuous Hannibal; and it frequently happens that the former triumphs when he knows how to prolong the war, and often tires out a more powerful enemy. In the like manner, it frequently happens that the physician, if he particularly exerts himself to preserve the existence of his patient as long as possible, and notwithstanding his feebleness to repel death day after day, at length overcomes the disease, and, contrary to expectation, restores him to welcome health."

But even where this cannot be done, the power of protracting life, even for a very short time, is of no inconsiderable value.

"Those acquainted," the author says, "with the value of human life, know the importance of a year, a day, and even an hour; and these, when spent amidst the full enjoyment of the vital functions, of how much importance to our whole existence! What events, fertile in consequences, depend often on one hour of our life! It is, therefore, an eternal and irreparable loss, when not enjoyed as it ought. On the bed of death, an hour often determines the fate of whole families and states. How many sick die in greater peace, because, by having lived an hour longer, they accomplished one of their most ardent wishes! With what anxiety do many dying fathers wish for such an hour, because they expect the arrival of an absent son! How grateful is this hour to surviving friends, who have received from a dying man information respecting some important event of his life! Is any thing farther necessary to give importance to the art of prolonging feeble life?

"In the present period, when the number of asthenic diseases is so considerable, this art must recommend itself; and indeed never was it so necessary both for the physician and the patient. This is the case in particular, among physicians of the first class, who have to struggle against artificial as well as natural debilities. It too often happens that asthenia exists to such a degree among enervated people, weakened by their mode of life, that no hope is left of restoring their lost health; much less of converting their increasing infirmities into rustic health and strength; and that the highest triumph which the medical art can obtain, is to assist the gouty voluptuary, or the nervous lady of fashion, to hold out for a couple of years longer; especially when he has to counteract or overcome

come incessant irregularities and debilitating habits, which his patients will not abandon. How many physicians, by their situation, are obliged to acquire experience in this great art, and yet are blamed because the artificial life which they procure to their exhausted patients, for a number of years, comes at length to an end!"

The requisites for obtaining this object are:

"1. An acquaintance with the nature of man; and particularly the study of the influence of the vital principle on the sound and diseased state.

"2. An acquaintance with the healing art, in its whole extent.

"3. A knowledge of the patient, his individual state and habit, in order to enable the physician to apply his knowledge of the general causes of asthenia to particular cases.

"4. A knowledge of the disease; its origin, its usual progress and its accidents, in order to avert approaching danger, if possible, and to lessen that which exists.

"On the part of the physician, who endeavours to effect the maintenance of asthenic life, the requisites, besides the necessary knowledge, talents, and address, are a high degree of acuteness and practical sagacity, and great attention to every thing that takes place in regard to his patient; presence of mind, to enable him to recover from embarrassment in sudden accidents; great courage, perseverance, and firmness, to prevent his patience from being exhausted by the many turns of the disease, unexpected incidents, and the peevishness of the patient; in a word, all those rare properties so difficult to be acquired."

This work is divided into two parts; in the first is contained the theory of the art, in which the author inquires into the nature of the vital principle, the manner of its connexion with organized bodies, and its existence in man, &c. "The vital principle," he says, "is self-subsistent, free, and independent. It is only modified by foreign powers, between which and it there is a certain mutual connexion. It exists also without this connexion; that is, without the organization which it at present animates. It is not confined to certain bodies; but is generally diffused throughout the corporeal world; it is indestructible. As soon as an organized body is decomposed, it removes from it, and communicates itself to another organization. In a word, it has a great resemblance to the electric fluid.

"The grounds of life, therefore, do not lie in organization,

nor in stimulants; both are necessary conditions of our existence on earth.

"The vital principle manifests itself differently, according to the organization in which it acts. This is the case not only in the different organizations of animal and vegetable nature, but also in regard to the difference of the organization of bodies of the same genus. Hence the different phenomena of the manifestation of the vital principle in some men; because each man has his own individual organization. This may serve to explain the difference of constitution and temperament.

"In the last place, the manifestations of the vital principle are varied by changes made in the organization by disease; and even by the changes which the organization experiences from external and internal stimulants, and by complete conformation at different periods of life."

Call the vital principle *Mind*, and we have here the metempsychosis. This, if not materialism, certainly leads to it; for how can we deny consciousness to a self-subsisting, vivifying being? The author, indeed, has no such intention; but why create an imaginary agent to explain what can be equally well explained without it? Passing over this part, therefore, which we do not approve, we shall proceed to the second part, containing the practice, and lay before our readers such specimens as may seem best calculated to give them an idea of the farther execution of this work, premising that a third part is proposed to be added, "to contain the treatment of some incurable or obstinate diseases, which relate to the maintaining of *feeble life*." Our readers will doubtless anticipate us here, in observing the impropriety of the term *feeble life*, particularly if we admit the author's definition, viz. that life is a self-subsisting, independent being. It must be the organs that are feeble — not this spiritual, ethereal agent; and, in fact, the art of sustaining life will be found to consist in adjusting the proportion of warmth, of air, exercise, and rest, of diet, or nourishment, and of the excretions, to the state and condition of the body; that they be not administered, on the one hand, in such profusion as to extinguish the small remains of life supposed to be existing, or so sparingly, as not to be sufficient to keep the vessels distended and filled to a proper point, to support the circulation, &c. To shew that this is the real doctrine of the author, when stripped of those terms which the new philosophy, as it is called, has introduced, we shall give a portion of his chapter on "*Regimen for the debilitated.*"

"Before

"Before we proceed," he says, "to the particular objects which form the subject of this chapter, we must first point out two errors into which physicians may readily fall, when they lay down rules of health for feeble patients. The first is, that the debilitated must observe a peculiar mode of life, totally different from that of people in sound health. They are subjected to the regimen of invalids, by which means their infirmity is converted into real disease, and the debility maintained. They are guarded with the most anxious care from the influence of the weather, and the least breath of cool air; they are scarcely allowed to take the smallest exercise, or if they do, it is with the utmost caution, lest they should be hurt: the tenderest and most delicate food is prescribed for them; light vegetable nourishment, weak beverage; in a word, they are prevented from being exposed to the action of strong stimulants, by which they might be put into greater activity, and they are kept in a continual state of inaction and rest, by which the internal and external powers are relaxed. To this may be added prejudice, superstition, and the misapplication of stimulating or strengthening things, which causes people to dread all excitement of activity in cases of debility, and thereby prevents the possibility of strengthening and hardening. If the debility be the consequence of excessive excitement, it may, in most cases, be removed by lessening the action of the stimulants, and not by totally withdrawing them: in regard to external stimulants, the nourishment, if too spirituous, and too highly seasoned, must be changed, &c. and in regard to the internal, bleeding and bathing may be employed, &c. These means, however, must be adopted only in a certain degree, and for a certain period, in order that the debility may not be increased: the object merely is to remove the causes of debility. If the debility arises from a deficiency of the necessary excitement, this deficiency must be supplied; and in that case, the strengthening diet, properly so called, is applicable.

"By mistaking the Brunonian system, however, we may readily fall into the opposite error, and wherever we see asthenia, think only of corroborants. But what kind of corroborants? Without paying attention to the causes of the asthenia, we immediately comprehend under this head, stimulating, strengthening food; wine, spices, flesh, and every thing else of the like kind. As I have already spoken of this pernicious misapplication, in the introduction to the third chapter, it is needless to add any thing more here on the subject.

"A peculiar regimen is necessary for debilitated patients. This, however, does not consist in food and drink prepared in a particular manner, but, generally speaking, in proper attention to that state. A great deal must depend on previous habit and mode of life. Debilitated persons, by careful attention to their constitution, to whatever is beneficial or hurtful to them, may prolong their lives for a considerable time, if their conduct, guided by the necessary knowledge and experience, is seconded by the advice of the physician. To guard against immoderation, and to pursue with care a middle course, will be the best means to accomplish the proposed end.

"Debilitated persons must be hardened, by lessening their sensibility in regard to stimulants. This hardening is the more necessary, as it is not always in our power to remove or withdraw the stimulants. Even the most delicate may, at a latter period of life, attain to a certain bodily strength and firmness; and, on the other hand, those who have been educated in a very hardy manner, and grown up to be men, exposed to country air, and severe manual labour, by a sedentary life within doors, and refinement, may become exceedingly tender, and sensible of the slightest impressions. I am acquainted with the sons of several country farmers, who having followed literary pursuits, acquired in a few years all the bodily debility and nervous weakness which belong to such a state. Have they lost or gained by the change?

"The bodies of debilitated persons must be gradually hardened. We can attain to real strength, only by a slow and tedious process. The transition to a more healthful mode of life must be gradual, and must take place in such a manner, that the patients be not subjected to any disagreeable restraint. Besides, this hardening method must be continued for a sufficient length of time, and people must never return to their former debilitating habits. This hardening consists partly in guarding against debilitating causes, and partly in employing strengthening means. The first forms the chief part of the cure. It is also the most difficult, and for that reason is too much neglected, as every thing is expected from corroborants. People plunge into the bath, and employ preparations of iron and herbs, wine and cinchona, without leaving off their darling habits; they find themselves deceived, and lay their infirmity and disease to the charge of the physician and his art.

"The physician must endeavour to find out the remote causes of the debility, and having discovered how far they depend on the will of the patient, must make the removal of them

them an indispensable condition. There are cases in which the physician, if he acts properly, and consistent with his own duty, will leave patients who have not resolution to consent to this removal, rather than degrade his art by improper compliance. The fault in the end, however, falls on the physician.

" This hardening is either general or local; changing the former debilitating mode of life, removing from town to the country, the daily use of free air, laying aside too warm clothing, abandoning the use of too soft a bed, and accustoming one's self to bodily labour proportionate to the strength. The transitions must take place gradually; if they are made suddenly, they may be attended with danger. A great deal will depend on this improvement in our mode of life, being the consequence of resolution and conviction. Of this Cornaro has given us an example worthy of imitation. In his thirty-sixth year, when his body was enervated in the utmost degree by dissipation, he had the courage to subject himself to the observance of the strictest regimen, by which he guarded, on the one hand, against debilitating causes, and on the other determined the nature and quantity of his food. His resolution was therefore rewarded with a life of nearly a hundred years.

" Local hardening of the organs consists partly in strengthening those organs which are more debilitated than others, and partly in strengthening the chief vital organs, in order to strengthen and maintain, by these means, the health of the body in general.

" Sometimes individual parts of our bodies suffer from a particular debility; as for example, the stomach, the lungs, the eyes, the extremities, &c. This debility may be known by some imperfection in those parts; by their incapacity for discharging their peculiar functions; by certain affections which take place in them; by a disposition to local diseases, and, in the last place, by their peculiar susceptibility for the general diseases of the body, by which they are chiefly attacked. Frequent pain of the stomach, belching, the symptoms of indigestion, when they occur after a light meal, a particular weakness of the organs of digestion in disease, or the appearance of these affections on the commencement of disease, are signs of a weak stomach. Organs debilitated in this manner, must be strengthened; and by these means we shut one passage against disease. I here allude to the strengthening means of food. This strengthening method we must direct either towards the suffering organ, in particular, or we must by general strengthening restore the deranged equilibrium of the whole organization. We strengthen the organ of the skin

skin by cleanliness, washing, bathing, the use of fresh air, moderate exercise; the lungs, by inhaling pure air, and by the moderate use of the voice; the stomach, by moderately stimulating food, motion, and bodily labour, &c. One organ is strengthened by another, with which it is connected; for example, the organs of digestion, by strengthening the skin, &c. It may be here readily understood, that debilitating causes must be guarded against at the same time. By strengthening and hardening the body, in an uniform manner, we remove partial debility, which may have arisen from the exclusive use of certain organs.

"By strengthening the principal organs, we endeavour to maintain health in general. This strengthening method consists not so much in corroborants applied to these organs, in particular, as in careful attention to maintain them in a certain state of perfection and strength, and to guard them from debilitating causes. It is of the utmost importance, that life should be preserved sufficiently active in these principal organs, as long as possible. On this depends the prolongation of our existence. The lungs, the stomach, the skin, and the organs of generation, are those chiefly to which our attention should be directed, and on the good state of which our health and well-being principally depend. The health and good condition of only one of these organs, has a great influence in maintaining life. As a proof of this, let us only attend to the observation that old people have generally a good stomach, and that eunuchs never attained to a great age, &c. The chief point here is to guard against all those things which have a pernicious influence on these organs.

"I now come to the diætetic regimen for debilitated patients; but without giving a general system on this subject, I shall confine myself to a few observations in regard to the asthenic state."

He then treats particularly on the choice and regulation of air, exercise and rest, warmth, clothing, diet, passions of the mind, &c. On these subjects it will be sufficient to say, the observations of the author are such as have been confirmed by the experience of ages. He concludes this section with the following judicious remarks:

"Tranquillizing the mind, freeing it from violent passions, and tormenting cares, has the most salutary influence in maintaining health and life; and without these, all other means will be ineffectual. Exciting agreeable mental activity, joy, hope, and love; moderate exertion, and exalted passions, prolong our existence, notwithstanding the greatest bodily debility.

debility. In the degree that these are deficient, vital consumption will be accelerated. Every thing, therefore, depends on maintaining a cheerful frame of mind, and in promoting good spirits by agreeable conversation and employment, travelling, a country life, friendship, social intercourse, and reading."

The rules before detailed for supporting life are then modified and adapted to peculiar states and situations in life; to infancy, to old age, and to persons recovering from disease; under all which heads the reader will find much useful information. The translator appears to have done his part properly; at least the language is very perspicuous, correct, and free.

An advertisement prefixed to the volume informs us, that "this work is translated from a copy of the original, with manuscript corrections and considerable additions by the author, transmitted from the continent to Mr. BLAIR, Surgeon, of London."

ART. X. *A familiar Treatise on the physical Education of Children, during the early Period of their Lives: being a Compendium addressed to all Mothers who are seriously concerned for the Welfare of their Offspring.* Translated from the German of CHRISTIAN AUGUSTUS STRUVE, M. D. Physician at Görlitz, in Saxony; Honorary Member of the Royal Humane Society of London, and of several literary Institutions. *To which are prefixed, Three introductory Lectures on the same Subject.* By A. F. M. WILLICH, M. D. Author of the "Lectures on Diet and Regimen," &c. Octavo. 449 pages. MURRAY and HIGHLEY, London. 1801. Price 8*s*.

OF the original work we gave a sufficiently ample account in our Review for March 1799; and should here have had only to remark, that the translator appears to have executed his office with diligent attention, and that the language is tolerably clear and correct — but he has annexed to the work three dissertations, or lectures, by way of introduction. These require to be noticed. In the first he gives "an historical sketch of the manners and customs prevailing among different nations, with remarks on the physical character and moral state of the Greenlander, Laplander, Samoiede, Tungooses, Tartars, Cashmirians, Hindoos, Greeks, Negro, Californian, Savage, Bedouin, and Abissinian. These he professes to have taken from "Mr. Herder's work, entitled Outlines of a Philosophy of the History of Man." The account of the Kal-

muks and Mongolians, which follows, will give an idea of the manner in which this part is executed.

"As there are many probabilities, that the first abode of the human species was on the Asiatic ridge of the earth, we might naturally expect to find the most beautiful race of men in that region. But how greatly should we be deceived in our expectation? The form of the Kalmuks and Mongolians is well known. With a middling stature, they have some remains of the flat visage, the thin beard, and the brown complexion of the northern climate; but they are distinguishable by the inner angle of the eye being acute, fleshy, and inclined obliquely to the nose; by narrow, black, slightly arched eyebrows; a small, flat nose, very broad at the upper part; large, prominent ears; the legs and thighs bowed; and strong white teeth, which, together with the rest of the features, appear to characterize a beast of prey among men. Whence proceeds this form? Their bow legs originate from their way of life. From their childhood they creep along upon their legs, or cling to the back of a horse. Their lives are spent between sitting and riding; and to the only position that gives the human foot its straight fine form, that of walking, they are almost entire strangers. And may not more of their figure be traced to their way of life? Have not the prominent brutal ear, that is ever listening—the small acute eye, that perceives the least dust or smoke at the greatest distance—the white, projecting, bone-gnawing tooth—the thick neck, and the backward reclining position of the head, become substantial features, and characteristics of their mode of living? If we add to this, what Pallas asserts, that their children, even to the age of ten, frequently have deformed and bloated faces, and are of a cacochymic or sickly aspect, till, as they grow up, they become better shaped; if we consider that rain seldom falls on extensive tracts of their country, that they have little water, or at least none that is pure, so that from their infancy they scarcely know what it is to bathe; if we reflect on the salt lakes and marshes, the saline nature of the soil they inhabit, the alkaline savour of which they relish in their food, as well as in the deluges of tea, with which they daily enfeeble their digestive faculty; if, farther, we consider the elevation of that country, the thin air, dry winds, alkaline effluvia, and long winters spent in the smoke of their huts, and with snow continually before their eyes; is it not probable, that their figure originated from these causes some thousands of years ago, when many of them perhaps operated still more forcibly, and thus insensibly

insensibly became their hereditary nature? Nothing invigorates our bodies more, and contributes in a greater degree to their growth and firmness, than washing and bathing in water; particularly if to these be joined walking, running, wrestling, and other bodily exercises. Nothing has a greater tendency to debilitate them, than drinking warm liquors; and those they swallow in immoderate quantities, seasoned with corrugating alkaline salts. Hence, as Pallas justly observes, the feeble and effeminate figures of the Mongolians and Burats, five or six of whom, with their utmost exertions, cannot do what can be executed by a single Russian; hence the extreme lightness of their bodies, with which, on their little horses, they seem to fly, or skim along the surface of the ground; hence, lastly, the diseased habit transmitted to their children. Even some of the neighbouring Tartar races are born with features of the Mongolian form, which disappear as they grow up: and this renders it more probable, that some of the causes dependant on the climate, are more or less ingrafted into the frame of the people, and rendered hereditary, by their descent and mode of life. When Russians or Tartars intermarry with the Mongolians, they produce handsome children, of delicate and well-proportioned shapes, but resembling the Mongolian standard. Here also, in their organization, Nature remains true to herself; a race of Nomades, beneath this sky, on this ridge of the globe, and with such modes of living, must be like so many human vultures.

"Embosomed in Alpine heights, like a hidden paradise, lies the kingdom of Cashmire. Its fertile and pleasant hills are surrounded by mountains ascending still higher, till the summits of the last, covered with eternal snow, are lost in the clouds. Here flow pellucid streams and rivulets; the earth is adorned with salubrious herbs and fruits; gardens and islands are clad in refreshing green; flocks and herds are spread over one universal pasture: while no savage animal or venomous reptile annoys this Eden. These may, as Bernier says, be properly named the mountains of innocence, which flow with milk and honey; and the race of men that inhabits them, is not unworthy of the place. The Cashmirians are allowed to be the most witty and ingenious people of India, equally capable of excelling in poetry and science, in arts and manufactures; the men are finely formed, and the women often models of beauty."

The author concludes these sketches with observations on the comparative advantages of the savage and uncultivated over

civilized life, and of the manifest degeneracy of the present age, both in mental capacity and physical force; hence the necessity of a new system of education, by which he seems to think, we may, in some degree, be renovated. "A few words," he says, "then, will be sufficient to recapitulate what we have actually gained, or lost, by our modern refinements in general. The lower orders of the people, especially in large towns, appear to have acquired immoral habits and relaxed principles, instead of their ancient simplicity of manners, and unshaken integrity. The middle ranks of society are, perhaps, the greatest gainers, as they are better informed, and have attained more skill in such pursuits as depend upon the combined agency of mental and physical talent. Lastly, the higher ranks have become unquestionably more enlightened with respect to their true interest: but I cannot repress the observation, that they have also become subject to hereditary diseases unknown to their ancestors; and that the acquisition of mental powers and abilities appears to be in no just proportion to the obvious decrease of physical energy. In short, our attainments in ethics are more extensive, perhaps more systematic; but I hope to be forgiven when I assert, that the present age appears to labour under a certain mental and corporeal imbecility, scarcely definable by words, but which is evident in that fickle conduct, in that peculiar want of resolution and mental vigour, which marks the actions of the most cultivated minds, and of which we rarely find instances among our less enlightened, but more consistent and determined forefathers."

We cannot help observing, that he dwells with too much force on the evils of civilized life, which are accumulated by him with no sparing hand; while those to which the savages are liable are but slightly glanced at, or passed over.

"The wandering Californian is placed, as it were, on the border of the habitable world, in a country which geographers, with great injustice, have called fertile. He lives in the most wretched indigence; has in general neither roof nor clothing, sleeps almost every night in a different place, and often with the greatest *difficulty escapes starvation.* The women of that inhospitable climate require no artificial aid from the hands of midwives; and the only cradle of their children, is the shell of the turtle. Nevertheless, this apparently unhappy race of people continually sport, sing, and smile; have a vigorous constitution, and attain a considerable age. *Diseases were unknown to them even by name,* till in the year 1763 the smallpox, and other disorders, were introduced among them: previous

vious to that period, the natives had no other phrase to express the word disease, than by saying, "He lies on the ground." The Californian endures pain with almost incredible fortitude; and awaits his dissolution with such resignation and indifference, as would not disgrace a philosopher.

"The Savage, as he is called, prefers the active free life of Nature to every other consideration: surrounded with perils, his powers, his courage, his resolution, are awakened; and he is rewarded with health in the field, with independence in his hut, with respect and honour among his tribe. He neither wants, nor desires more: and what addition to his happiness could he derive from another state, with the advantages of which he is unacquainted, and to the inconveniences of which he cannot submit? Let us read the various unadorned speeches of those whom we call Savages, and say, whether sound sense and natural justice be not conspicuous in them. The frame of man, too, in this state, is as much improved, though with a rude hand, and but little advantage, as it is capable of being improved in it: he is formed for a contented equanimity, and to welcome death with calmness, after the enjoyment of a life of permanent health."

These are surely the dreams of a Utopian, not the result of observation and experience.

In the next lecture the author treats of the errors and prejudices prevailing in the treatment of children; but these are only echoes or repetitions of the opinions of Dr. Struve, and therefore need not to be noticed.

The third and last lecture contains strictures on several systems of education, especially that of Rousseau, and concludes "with an abstract of Professor Hufeland's opinions relative to the food and drink, sleep and cries of children."

The author, as might be expected from his favourable opinion of a savage life, seems more attached to the scheme of Rousseau than so visionary a plan deserves. In the opinions of Professor Hufeland we see nothing new, unless, perhaps, the following remark, containing an allusion to a vice, which, we trust, rather resides in the imagination of the Professor, than in the persons to whom it is addressed; or, at least, we think it should have been omitted in a book intended for the nursery.

"Another habit," the Professor says, "still more dangerous, and often destructive in its consequences, deserves severe animadversion: it is the practice of playing with children after sleep, while they remain in bed, or suffering them to indulge

their fancy, when awake in the morning. Thus, alas! the stimulating heat of the couch, together with the accumulated matters destined for evacuation, almost insensibly rouses certain sensations, which but too frequently unfold the dormant sexual instinct at an early period of life. Those parents and guardians who are anxious to preserve their children from vice, ought cautiously to guard against such habits."

ART. XI. *A Sketch of the Rise and Progress of the yellow Fever, and of the Proceedings of the Board of Health, in Philadelphia, in the Year* 1799. *To which is added, a Collection of Facts and Observations respecting the Origin of the yellow Fever in this Country; and a Review of the different Modes of treating it.* By WILLIAM CURRIE, Fellow of the College of Physicians, and Member of the American Philosophical Society, &c. Octavo. 112 pages. Printed by BUDD and BARTRAM, Philadelphia. 1800.

FEW diseases have met with more general attention than the yellow fever, and, when we consider the ravages which it has made, and the difficulties attending the investigation of its nature, its cause, and its treatment, none are more deserving our notice. We are sorry, however, that the endeavours to detect its nature, or to diminish its fatality, have been attended with so little success. Practitioners are still at variance on some of the most important subjects connected with this disease.

Dr. Currie's view in this publication is, to prove that the yellow fever, both of the year 1799 and of former years, originated from a foreign source; to correct the idea he formerly entertained of the identity of the yellow fever and typhus gravior; and lastly, to shew the insufficiency of the former modes of treatment, and point out that which with him proved most successful.

The author employs the first pages of his Sketch in a journal or history of the appearance and progress of the disease in the year 1799. By this we are informed that the first cases were observed about the 15th of June, and that the disease finally disappeared about the 20th of October, after a few nights of severe frost. He is of opinion that the introduction of it was owing principally to two infected ships from the Havannah and St. Domingo (where the fever at that time raged,) which were suffered to lie at wharfs; and partly to goods brought from

from the same sickly ports being landed in lighters. The quarantine, too, was repeatedly violated by persons coming up from vessels under quarantine in the night, and returning on board before morning.

He states the reluctance of the Board of Health to attending to the representations of the College of Physicians of Philadelphia, on the existence of the yellow fever; and in confirmation of his idea of the disease being imported from the West Indies, he adduces the evidence of Dr. James Tytler and Dr. David Hosack. The former attributes its appearance in Newbury Port to a schooner which arrived from St. Thomas's, when the fever raged, on the 27th of June, and which infected people who went on board it: the latter is of opinion that the principal cause of its introduction at New York was a vessel which had come from St. Domingo; and that the very small number of cases which occurred previous to her arrival might be easily accounted for, "by persons ill with this disease, or coming from infected ports, being permitted to come to the city with their vessels, without passing through a regular quarantine;" or, "by exposure to the latent infection of the preceding year, which may have been retained in goods, but become active by returning heat."

Dr. Currie next adduces a long chain of evidence from various respectable authors (for the detail of which we must refer our readers to the tract itself) to prove not only that the yellow fever is contagious, but that whenever it has made its appearance it has been imported.

He thinks there is no evidence, either direct or analogical, for the supposition which some entertain, of its owing its rise to putrefied coffee, and is not disposed to adopt the opinion of Dr. Mitchill, that it can be produced by gaseous oxyd of azot. A certain change in the state of the atmosphere, which is supposed to convert the former mild fevers into malignant ones, he considers equally unfounded; but admits that the "contagion of the yellow fever, like that of the plague, requires a certain range of temperature to act injuriously on the principle of life," and that "it is more readily and certainly communicated when the atmosphere is replete with putrid exhalations, than when pure and free." A temperature between the freezing point and 80°, he considers most favourable to its propagation.

With regard to the diagnosis of the yellow fever, Dr. Currie is of opinion, that it is sufficiently distinguished from typhus gravior by the operation of the contagion of the former being confined

confined chiefly to the latter end of summer or autumn, while that of the latter acts nearly equally at all times. Its contagious nature, the appearances on dissection, and some symptoms, which he enumerates, occurring in the generality of cases which prove mortal, seem to prove that it differs from bilious fever not only in degree, but in kind.

It now remains for us to state the author's principal observations on the method of cure. He disapproves of the sweating treatment, proposed by Dr. Warren, of Barbadoes; of the cold bath, recommended by Drs. Wright, Jackson, and Maclean; and of mercury, as proposed by Dr. Chisholm.

"If my observations have not greatly deceived me," says he, "mercury has protracted the fever and retarded the cure in every case where inflammatory symptoms have predominated, and inflammatory symptoms do predominate at the beginning of the disease, in a considerable proportion of cases; except it be given in doses sufficiently large to occasion copious evacuations from the bowels.

"It was seldom possible to excite salivation in any case where symptoms of malignity were evident; on the contrary, mercury appeared to force out life in rapid streams, and when salivation was excited in mild cases, it was by no means a proof that the mercury occasioned the removal of the disease, but more probably that the cessation of the fever was the cause of the salivation taking place; for in simple and mild cases, a solution of the fever generally takes place without any remedy on or before the fifth day from the attack."

The author's practice seems to be comprised in the following extract:

"When tension of the pulse, with hot skin, indicated inflammatory diathesis, and especially when accompanied with pain in the head, side, or stomach, in addition to the antiphlogistic regimen and frequent purging, by means of a solution of Glauber's salts and tartarized antimony,—blood-letting was of sensible service; and in some extraordinary cases, where no mercury was used, the symptoms called for it to a fourth or fifth time at the short intervals of eight or ten hours. In mild cases, where mercury was given in small doses so as to keep up an inflammatory diathesis, bleeding has been employed to an almost incredible extent, and in many cases without apparent injury; but as the disease was then an artificial one, and not the original fever, I leave it for others to determine the propriety of such treatment.

"In

"In general, in the most inflammatory cases, three moderate bleedings, when aided by the free use of cathartics, were the greatest number necessary; and it was for the most part necessary to restrict bleeding to the first three days from the attack of the fever.

"In cases where the fever began with great and sudden prostration of strength, and the symptoms continued with great oppression and weight about the heart, accompanied with pale or livid countenance, low pulse and moderate heat, and such cases were numerous, bleeding did manifest and irreparable injury.

"In cases where symptoms of malignity and great debility in the animal powers made their appearance early, or came on in the course of the disease, I think I have seen the fatal event longer retarded by the liberal use of sulphuric acid sufficiently diluted with water, washing the patient's body and limbs at the same time two or three times a-day with cold wine, or brandy and water, than by any other remedies. The body and limbs were wiped dry after every washing, and covered from the air for some time. If sensible strength succeeded the washing, it was encouragement to proceed in the same manner. When that was not the case, warm applications were substituted.

"When that dreaded symptom, the black vomiting, made its appearance, which was very common towards the close of life, accompanied with cessation of pain, moist tongue, cold extremities, and pulse slower than in health, no remedies that I have seen tried were of much avail—though some medical gentlemen in New York declare that they have recovered a great many in that condition by means of the free and frequent use of simple lime-water and sweet milk. Some instances have also been recorded, in other places, of the disease being cured by the liberal use of brandy and water taken cold.

"When the febrile symptoms suddenly subsided, and were shortly after succeeded by incessant inclination to vomit, with great restlessness and sighing, which in dangerous cases generally occurred on the third or fourth day from the attack, moderate and repeated blood-letting, clysters, and blisters to the stomach and thighs, and the liberal use of cool acidulated drinks, were the most successful remedies, although the apparent debility seemed to contraindicate their use. In the latter stage of dangerous cases with typhus symptoms, unconnected with symptoms of inflamed stomach, or congestions in the

brain, liver, or any of the other viscera, boluses of volatile salts, instantly followed by a table-spoonful of lemon-juice diluted with cool water, and in some cases camphorated vinegar, have been employed with apparent benefit. Port wine and porter, as well as every other remedy that stimulated considerably or suddenly, aggravated the disease; whereas the diluted juices of fresh vegetables, particularly of lemons, oranges, grapes, and currants, bottled small beer and mead, were not only frequently beneficial, but highly grateful to the patient.

"Wine, bark, and opium, so frequently beneficial in bilious and typhus fevers, were found decidedly injurious in every case of yellow fever.

"As in malignant cases of every kind of fever, there appears to be an extraordinary deficiency of oxygen, if we may judge from the colour and consistence of the blood, medicines which contain the greatest portion of that material, and part with it most easily, promise to be the most useful remedies. On this principle, the oxygenated muriate of potash will be found superior to any other remedy at present known.

"In the year 1797, Dr. Hodge employed full vomiting in the early stage of fever, after moderate blood-letting, with remarkable success; for of seventy patients, whom he treated in this manner, he lost but three."

Some additional observations on the treatment of yellow fever are added in a letter from Dr. Hosack to the author. This disease, Dr. H. thinks, consists in a peculiar poison introduced into the system; and his principles of cure are to moderate its action, and remove every other source of irritation. Both those views he accomplishes by removing from the bowels any matters which may aggravate the disease, and by restoring the obstructed perspiration. Sweating, when induced within twelve hours from the commencement of the disease, after the bowels are cleared, he regards as no less certain a remedy for yellow fever, than Peruvian bark for an intermittent. He gives salts dissolved in large quantities of warm water, and encourages perspiration during their operation, by warm covering, warm drink, bricks heated and steeped in vinegar, and immersing the lower extremities in or fomenting them with vinegar and water. The sweating must be kept up two or three days, or till the fever disappears; otherwise an affection of the stomach may be produced, which, if not speedily removed, will be followed by the black vomit.

When

When this has come on, blisters, yeast, and the saline mixture have occasionally given relief; and when the matter evacuated resembles coffee-grounds, lime-water in the quantity of half a wine-glassful every hour, mixed with porter or milk, has in many instances removed it. When the matter discharged resembled black flakes, which appear to Dr. H. to indicate a destruction of the coats of the stomach, he has never seen any remedy of use.

It would have been advisable for Dr. Currie, in this publication, to have given a comparative statement of the success attending the plan of treatment which he adopted.

MEDICAL CORRESPONDENCE.

(Communications for this department will be gratefully received.)

Art. 12. *Account of a peculiar Method of operating for the Hare-lip.* Extracted from a Memoir by Mr. OLLENROTH, Surgeon-general at Halle, in Arneman's Magazin für Wundarzneiwissenschaft.

(Illustrated by an Engraving.)

ABOUT sixteen years ago, the celebrated itinerant surgeon, Koehring, performed various operations in this place (Halle) with great ability: amongst others, he did the hare-lip operation upon two children, one of whom was four, and the other six years of age, in the following manner:

Through both of the lower diverging angles of the slit, he drew, by means of a crooked needle, a long silken thread, which he used as a kind of handle to draw the two angles evenly downwards, keeping them a little off from the teeth, so as to obtain room for introducing into the intermediate space one blade of a very sharp and straight pair of scissars, with which he cut through the edges of the slit, to the right and left of the silk threads, with a single cut on each side; and in such a manner that the two cuts met accurately together at the angle of the slit, and the whole portion that had been cut out from its edges hung down in the form of a Λ, from the handle of the scissars. He then washed the edges with a soft sponge dipped in warm water, and suffered them to bleed a little. An assistant, who had hitherto been employed in holding fast the head of the patient, now pressed the muscles of the cheeks,

on both sides, forward towards the wound, so as to bring both of its edges into contact. The operator then took a crooked, small, and very sharp needle, to which a piece of fine waxed thread was attached, and inserted it first at the bottom of the slit, at the distance of three lines from the edge of the wound, drew it through behind, and brought it out again at the opposite side, three lines from the edge: he then drew the thread through, and made the *sutura nodosa* in a straight direction, on the edge of the upper lip, with a surgeon's knot. At the distance of four lines above this suture, he made a second in the same manner, and a third above that, nearer to the angle of the slit. Thus the operation was performed on the child six years old. He immediately operated in a similar manner on the other, four years of age; though, as the slit did not reach so high in this case as in the former, only two sutures were necessary.

Over these sutures he laid two slips of sticking-plaster, and between the lips and the gums he introduced, by means of a spatula, a folded piece of fine rag, dipped in balsam of Peru, with which he also slightly spread the wound over the sticking-plaster.

In order to give these sutures the proper degree of security, a linen cap, which had been kept in readiness for the purpose, was fixed on the head of the patient, and the assistant now removed his hands from the cheeks of the patient, which he had till then pressed forwards between them; their place being now supplied by the cap, which projected a little on both sides, where two clasps covered with plaster-linen were attached to it: these the operator drew forwards on both sides, so that when they were applied to the muscles of the cheeks, the wounded lip was fixed almost into a fold. The clasps reached on each side as far as the corner of the mouth, where each terminated in three hooks, the lowermost of which came to be situated in a right line with the corners of the mouth; round these hooks a waxed thread was twisted in the form of 8888 by means of which not only the upper lip was kept fixed in a kind of fold, but the suture also was rendered still more secure, and guarded from the injury it might otherwise have received from the motion of the lips.

These clasps are made of thin brass plates, and their length is three inches. One inch of this length is sewed to the cap on each side; and at this place the breadth of the clasp is only half an inch, from whence it is carried on in an oval curve to the front, having for its largest diameter an inch and a half;

a half; and terminating in a projection a quarter of an inch broad, and somewhat less than a quarter of an inch long. This short termination is bent outwards into two blunt angles, and formed into three hooks; the oval diameter is somewhat convex on the side where it comes to lie upon the cheek, the outer side concave, and the upper and under margins bent outwards; the whole margin is perforated with small holes, in order that the adhesive plaster may stick the faster to it, and that it may be fixed to the cap.

Both surfaces are thinly spread with adhesive plaster when the cap is to be applied. I commonly make use of the following composition for this purpose:

℞ Resinæ pini ℥vj, Sevi vaccini ℥ß, Ceræ alb. ℥vj, Terebinth. Venet. ℥ij. M. Ft. Emplastr.

In order that the cap also might be properly secured on the head, a long slip of adhesive plaster, three inches broad, was closely applied over the cap round the whole head, from the back to the fore part, and the two ends sewed crossways over the forehead; and at both sides the cap was provided with a broad strap, which was tied in a bow under the chin.

Complicated as this whole apparatus is, it has however the great advantage, that young patients cannot so easily injure the wound by crying, or motions of the lips; and that liquid nourishment and drink may be administered to them, with greater safety, by means of a spoon adapted for the purpose.

Both the above-mentioned patients felt very little pain after the sutures had been made, and no inflammation or suppuration followed. The wound was dressed externally once a day, with balsam of Peru, and a piece of rag dipped in the same was introduced twice a day between the lip and the gums. After the space of six days, the edges of the wound had joined firmly and evenly.

On the seventh day the operator cut through the first suture, and drew out the thread; on the eighth he divided the middle, and on the ninth the lowermost suture; he applied two slips of sticking-plaster to the lip, and directed that the cap should be worn six days longer.

The figures contained in the annexed engraving will clearly illustrate the form and application of the bandages, &c. described by Mr. Ollenroth.

Art. 13. *Extract of a Letter from Dr.* MITCHILL *of New York, to Mr.* BLAIR *of London, concerning the Medical Repository, and on the antivenereal Effects of nitrous Acid: with an Account of some Experiments made by Mr.* KUNZE, *Apothecary to the New York Hospital, tending to prove, that syphilitic Ulcers discharge an acid Matter: to which are subjoined the Result of similar Experiments made at the Lock Hospital, by the late Dr.* INGENHOUSZ; *and Remarks on the Use of Hepar Sulphuris in Cases of Ptyalism.*

To the Editors of the London Medical Review and Magazine.

GENTLEMEN,

I AM daily in expectation of receiving from New York a copy of a periodical work, entitled THE MEDICAL REPOSITORY, which cannot be uninteresting to your numerous readers; and which I shall therefore take the liberty of sending for your perusal. If it shall appear to be consistent with your plan, I doubt not that you will embrace the earliest opportunity of laying a summary of its contents before the public, through the medium of your Review. In the mean time, I beg leave to transmit you an extract from a letter with which I have just been favoured, from Dr. MITCHILL of New York, one of the Editors of the publication alluded to. His Communication is dated the 3d of December 1800.

"The display which the Medical Repository gives of what is going on in the Western hemisphere, greatly surpasses any thing I could have believed possible to have been collected and published in this country: nor is there now any deficiency of materials; on the other hand, they flow in in quantity greater than can be disposed of quarterly; so that some of our correspondents complain that their pieces are not published early enough.

"There are several subjects on which you will find many new communications and accounts of publications which have never reached Europe:

"1. Many original pieces concerning the yellow fever, shewing the notion of its contagiousness is unfounded and fabulous; that it is not imported from foreign places; but is produced from *septic vapours*, and these of an *acid* quality, among ourselves.

"2. Much new experiment and discussion on the doctrine of phlogiston, as carried on in America, contained in Dr. Priestley's

Priestley's and Mr. Adet's pamphlets; in Dr. Priestley's Series of Letters to Dr. Mitchill; in Dr. Mitchill's Plan of Reconciliation, by striking Hydrogene from the Nomenclature, and substituting Phlogiston; and in Dr. Woodhouse's answers to Priestley.

" 3. A large body of information, relative to the geology, geography, natural history, and mineralogy of America, not found in any other work.

" 4. A considerable number of my essays, in the form of letters to my correspondents, in explanation of my doctrine of pestilential fluids; each of which, though a separate performance, is nearly connected with others, and with the general doctrine. More of my pieces, and of the developement of the theory of pestilence, is contained in this work than in any other. More will continue to be inserted; for the basis of facts, and their application, daily grows broader and broader, notwithstanding the strange stories about nitric acid, and the stranger ones concerning nitrous oxyd!

" Your books on the venereal disease were highly acceptable to me. You have combated, with success, the dogmatical assertions of some persons, who are fond of making the world stare once a month with their novelties. Nitric acid in syphilis! Why, Sir, you will see in the last number sent to you of the Medical Repository, that I have been treating *secondary venereal ulcers with alkalies, and very agreeably!*

" I copy for you the experiments I have just had made, to prove that THE PUS, ESPECIALLY OF FOUL AND SYPHILITIC ULCERS, CONTAINS AN ACID. This you may publish if you will.

" *Letter from* HENRY C. KUNZE, *Apothecary to the New York Hospital, to Dr.* MITCHILL, *one of the Physicians of the same, and Representative for the City of New York in the Congress of the United States, dated November* 26, 1800.

" ' DEAR SIR,

" ' I send you an account of the experiments made by ' Mr. Brouwer, the house-surgeon, and myself, at your re- ' quest, upon purulent matter. I am happy to find the result ' confirms your opinion, that pus is often in an *acid state*. Of ' the subjects chosen to make the experiments on, three were ' labouring under syphilitic ulcers, as chancres and buboes, ' two with sore legs, and one with a recent wound on the head. ' In the sores of these persons, papers tinged with litmus- ' juice were placed; upon examination several hours after, we ' observed that two of the papers *in the venereal sores had*

'*changed to a deep red.* The paper in the third venereal ulcer 'had not changed its colour, but its texture appeared to be 'much eroded and dissolved by the action of the pus.

" 'Of the two papers in the sore legs, only one was changed 'red; the other had undergone no perceptible change, nor had 'the paper in the recent wound on the head suffered any ma-'terial change.

" 'In order to ascertain that the redness of the paper was 'not owing to any hæmorrhage from the smaller vessels of the 'sore, we dipped them in a solution of the carbonate of soda, 'when they resumed their original colour.

" 'With respect to these two cases, where the experiment 'did not succeed, I beg leave to observe, that one of them '(the sore leg) was nearly well, the surface of the sore being 'but small, and the pus well digested. The other was the 'case of a recent but small wound of the head, in which the 'pus was also well digested. These last cases seem to confirm 'another opinion of yours, that pus is *not an acid when first* '*secreted*, nor when it is well digested.

" 'Another observation I wish to make, that for some days 'previous to making the experiment, the sores had no other 'dressing applied to them than the ung. simp. of the shops, 'and after the papers were applied, nothing but dry lint was 'put on.

" 'Looking over Hoffman's works, I find in tom. iv. of 'his Medicinæ Rationalis System. cap. iv. sect. 6. where he 'treats of ulcers, that it was the common opinion of physi-'cians in his time, that pus was an acid; though he is in-'clined to consider it the product of putrefaction.

" 'Wishing you success in your endeavours to promote 'medical science, I have the honour to be, with respect and 'esteem, 'Your humble servant,

'HENRY C. KUNZE,
'Apothecary to the House.

" '*P. S.* Since writing the above, I have the pleasure to 'inform you the experiment has again succeeded; the litmus 'paper was left only *four hours* in a syphilitic ulcer on the leg, 'and was *changed to a red colour.*

'*To the Hon. S. L. Mitchill, Esq.* H. C. K. &c.'

" Is not *this acid* a something that will explain many phenomena of ulceration; of the benefit of *alkaline applications*; and when the acid virus is absorbed, of the symptoms of hectic fever? Your nitric acid folks have got hold of the wrong end of the story.

story. Do not prejudge me: I have not half done with the discussion yet; though I find I must instantly finish my letter. "Yours, very respectfully,

"*To* Wm. Blair, *Esq.* Sam. L. Mitchill.

"*P. S.* The last twelve months have afforded nothing in America favourable to nitric acid in syphilis, that I have heard. We prescribe mercury as usual. Dr. Saltonstall, who saw Dr. Scott at Bombay, and talked with him, told me he had given up his notion of the aqua-fortis bath. But you must read the intelligence in the Medical Repository.

"S. L. M."

Upon receiving the above letter from Dr. Mitchill, it immediately occurred to my recollection that Dr. Ingenhousz, whose scientific labours are generally known, made some experiments with me at the Lock Hospital above two years ago; which, as they are closely connected with those of Mr. Kunze, I here beg leave to recite. I do not trust to my memory for the results of these experiments, but shall copy a memorandum which I made in November 1798.

'*Memorandum.*

'On the 8th of November I made a variety of experiments 'at the Lock Hospital, with Dr. Ingenhousz, in order to 'ascertain whether the discharge from gonorrhœa, chancres, 'and buboes, was of an acid or an alkaline quality. We found 'it, in every case, to be *alkaline*.

'The test we used, was paper which had been previously 'dipped in an infusion of litmus by Dr. Ingenhousz, and 'which he had prepared in the most careful manner for deli-'cate experiments. This paper turned of a blueish hue, on 'being applied to the venereal matter.'

It should be added, that the Doctor accompanied me in my examination of the new patients, as well as in my attendance on those who were before received into the Hospital; and that our experiments did not produce different results, to whatever subjects we applied them. I am therefore satisfied that this account of our trials may be depended on: but, as those made at the New York hospital differ so materially from these, it still remains for future experimentalists either to verify or refute them.

I have now lying before me a note long ago received from Dr. Ingenhousz, in which he refers me to a French publication of his, for an account of the efficacy of hepar sulphuris "*(foie de soufre)*" in cases of violent ptyalism. After having fairly

fairly exhibited this medicine, however, I could not perceive that it possessed any such virtues as had been ascribed to it. I mention this, because respectable men are still advising us to give the hepar sulphuris as an antidote against profuse salivations.

I remain, &c.

Great Russel Street, WILLIAM BLAIR.
Bloomsbury, Feb. 8, 1801.

Art. 14. *On the State of Medicine in Turkey.* Communicated to the Editors by Dr. BOUTTATZ.

THE science of medicine is in very high esteem among the Turks: all their libraries are rich in medical works. Besides the manuscripts of Avicenna and Ruschad, they are in possession of the best Greek, Hebrew, Chaldean, and Indian works written in the Arabian language. The works of the great Sydenham are to be seen in the library of Raghib Pacha. The Sultan Mustapha the Third, who was a great patron of Ottoman literature, caused the Aphorisms of Boerhaave to be translated by the brother of the Imperial ambassador Herbert. And had the Sultan lived somewhat longer, the translation of Boerhaave's Physiology, undertaken by Raicovich, would have been completed. There are in Constantinople a great number of Turks, Jews, Armenians, Christians, and renegadoes, who, by the practice of the medical art among the nobility, and at the court, amass very considerable fortunes. Many Turkish physicians, as for instance Hagy Pacha, Mustapha Effendi, Seid Muhamed, Hairullah Effendi, and others, have acquired great reputation by means of their medical writings, which are deposited in the library of Constantinople. Yet, although this art is of essential use to the Turks, it has not attained that perfection which a liberal support of the government might have given it. In Solimannie, two professors read lectures twice a week on medicine and surgery, at which persons of other religions are permitted to assist: but their knowledge of anatomy is acquired solely through the medium of books, their religion expressly prohibiting dissections; consequently the knowledge of the students is entirely confined to the observations found in books, and to the instructions of the physicians in the habit of visiting hospitals. Mustapha the Third was a liberal patron of physicians, and actually devised a plan, whereby to promote the improvement of the medical science; but

he

he died before he could put it into execution. The inoculation for the small-pox is generally adopted, especially in Asiatic Turkey. In Persia this disease has been known time immemorial. Among the Circassians the practice of inoculation has been generally introduced, in order to preserve the beauty of their daughters.

Art. 15. *Report of the Diseases prevailing in London during the Year* 1800: *with Observations.* By Dr. MURRAY, Physician to the Public Dispensary.

To the Editors of the London Medical Review and Magazine.

GENTLEMEN,

NOT having observed in your miscellany any accounts of the diseases prevalent in London at different seasons, I now transmit to you a statement of those which occurred to my own observation during the last year, exhibited in a tabular form. Although the cases which can fall under the notice of one individual must necessarily bear a very minute and even inconsiderable proportion to those occurring in the whole metropolis; yet as it will be manifest that the observations here offered are the result of a practice of some extent; as they have been recorded with all the attention to accuracy that the nature of the statement admits of; and as it is only from the communications of individuals that any general information on the subject can be obtained; the following will, perhaps, not be unacceptable to your readers.

A series of reports, commencing from the conclusion of this annual statement, shall be continued monthly †, if you desire it.

It is scarcely necessary to add, that the cases here referred to, have chiefly occurred among the lower orders of society.

I am, Gentlemen,

Greville Street, Your most obedient servant,
Feb. 23, 1801. T. A. MURRAY.

† The obliging offer of Dr. MURRAY will be thankfully accepted.

*** The contents of the following list, with some of the annexed observations, have already appeared in successive numbers of the British Magazine, and are republished, under their present form, by permission of the proprietors.

List of Diseases in 1800.	January 1 to Feb. 20.	March 20.	April 20.	May 20.	June 20.	July 20.	August 20.	Sept. 20.	October 20.	Nov. 20.	Dec. 20.	Total.
Febres intermittentes	—	1	—	—	3	1	1	—	1	1	—	8
Quotidiana cephalalgica	—	—	1	2	—	—	—	—	1	—	1	5
Febres continuæ	29	10	15	31	28	31	30	24	33	35	22	268
Hectica —	5	—	—	3	1	2	2	—	3	2	2	20
Ophthalmia —	1	1	—	—	3	1	—	4	2	—	1	13
Cynanche inflammatoria	3	2	1	—	3	3	4	2	5	3	2	28
Cynanche parotidæa	—	1	—	—	1	—	—	—	—	1	—	3
Cynanche trachealis	—	—	—	—	—	1	—	—	—	—	—	1
Pneumonia —	6	4	3	2	1	6	6	4	8	8	2	50
Peripneumonia notha	—	—	—	—	—	—	—	—	1	1	—	2
Gastritis —	—	—	—	—	—	—	1	—	—	1	—	2
Enteritis —	1	1	—	—	—	1	—	—	2	—	—	5
Hepatitis —	—	—	—	—	1	—	—	1	—	2	—	4
Nephritis —	—	—	—	—	1	—	—	—	—	—	—	1
Cystitis —	—	—	1	—	—	—	—	—	—	—	—	1
Rheumatismus acutus	4	6	8	1	—	2	—	2	2	5	4	34
Rheumatismus chronicus	16	8	7	8	8	18	6	9	5	8	4	97
Lumbago —	—	—	—	—	3	—	—	2	1	3	—	9
Ischias et chiragra	—	—	1	—	—	—	—	—	1	1	1	4
Podagra —	1	—	2	2	2	—	—	1	2	—	—	10
Erysipelas et erythema	3	—	1	—	2	1	1	3	2	2	2	17
Variola —	—	—	2	—	1	3	12	8	5	7	—	38
Varicella —	—	—	—	—	—	—	—	3	—	—	—	3
Rubeola —	—	—	2	—	—	4	—	—	—	—	1	7
Scarlatina —	—	6	—	—	—	—	—	—	2	8	—	16
Aphtha —	1	—	—	1	1	2	—	—	1	—	—	6
Pemphigus —	—	—	—	—	—	—	1	—	—	—	—	1
Urticaria —	—	—	—	—	—	—	—	—	—	—	1	1
Epistaxis —	—	1	—	—	—	—	1	—	—	1	—	3
Hæmoptysis —	2	2	3	3	2	2	2	—	1	—	1	18
Phthisis —	14	8	9	11	9	3	13	6	4	4	8	89
Hæmorrhois —	3	2	1	1	—	—	2	1	1	4	1	16
Menorrhagia —	4	5	1	2	1	3	4	1	1	2	3	27
Abortus —	2	—	1	—	3	1	—	—	—	—	—	7
Leucorrhœa —	2	2	3	3	1	3	6	4	3	1	3	31
Hæmorrhagia intestinalis	—	—	—	—	1	1	3	3	—	1	—	9
Hæmatemesis	2	1	—	—	1	1	1	1	1	1	—	9
Catarrhus —	143	54	32	19	21	11	9	6	16	35	39	385
Dysenteria —	1	1	—	2	—	1	—	4	11	5	5	30
Apoplexia —	1	—	1	—	—	—	—	—	—	—	—	2
Hydrocephalus internus	1	2	—	1	—	—	—	—	—	—	—	4
Paralysis —	3	—	2	3	2	3	3	1	1	—	3	21
Syncope —	—	—	1	—	—	—	1	—	—	—	1	3
Dyspepsia —	25	9	16	15	15	22	37	31	23	19	14	226
Trismus —	—	—	1	—	—	—	—	—	—	—	—	1
Chorea —	1	—	—	—	—	—	—	—	—	—	—	1
Epilepsia —	1	1	2	1	1	—	2	—	2	1	—	11
Palpitatio —	2	1	—	—	—	—	—	—	—	—	—	3
Asthma —	—	—	1	—	—	—	1	—	—	—	—	1
Dyspnœa —	—	—	—	—	—	—	3	—	—	—	2	5
Pertussis —	—	—	—	1	2	—	—	—	—	—	1	6

List

List of Diseases in 1800.	January 1 to Feb. 20.	March 20.	April 20.	May 20.	June 20.	July 20.	August 20.	Sept. 20.	October 20.	Nov. 20.	Dec. 20.	Total.
Pyrosis —	1	—	1	—	—	—	—	1	1	1	—	5
Colica —	5	—	1	4	3	—	4	8	1	1	1	28
Colica pictonum	—	2	—	1	1	—	—	—	—	—	—	4
Cholera —	—	—	1	—	—	—	12	15	10	—	—	38
Diarrhœa —	12	2	8	9	7	12	27	31	7	11	6	132
Diabetes —	—	—	—	—	1	—	—	—	—	—	—	1
Hysteria —	1	—	4	4	—	—	1	—	1	—	—	11
Mania —	—	—	1	1	—	—	—	—	1	1	—	4
Tabes —	2	3	1	2	1	2	7	5	3	—	3	29
Hydrops universalis	8	6	3	4	1	5	—	7	3	—	—	37
Anasarca —	—	—	—	—	7	—	3	2	2	3	2	19
Ascites —	—	—	—	—	—	—	—	1	—	—	2	3
Hydrothorax —	1	5	1	—	—	—	1	—	—	—	1	9
Scrofula —	3	—	—	3	1	1	—	1	1	1	—	11
Icterus —	2	1	1	2	—	—	2	2	—	3	1	14
Contractura —	—	—	1	—	—	—	—	—	—	—	—	1
Enuresis —	2	—	—	—	—	—	—	1	2	1	—	6
Dysuria —	2	1	3	—	—	—	2	—	2	—	—	10
Amenorrhœa —	12	3	3	6	5	4	6	5	2	2	5	53
Dysmenorrhœa	2	1	—	1	—	—	—	—	—	—	—	4
Psora —	2	1	4	4	2	6	2	2	1	4	2	30
Morbi cutis chronici	8	3	9	12	12	6	10	11	7	5	6	89
Febris infantilis	4	3	5	3	10	10	4	3	3	2	2	49
Dentitio —	—	—	—	—	—	—	—	—	1	1	1	3
Verminatio —	3	3	—	3	6	6	5	—	3	5	6	40
Cephalalgia —	5	—	—	5	1	2	3	3	6	1	—	26
Asthenia —	15	2	7	12	13	13	14	8	16	8	1	109
Pleurodyne —	—	—	—	4	5	—	5	—	—	3	1	18
Bronchocele —	1	1	—	1	—	—	—	—	—	—	—	3
Angina pectoris	1	—	—	—	—	—	—	—	—	1	—	2
Total	369	169	172	194	194	194	260	225	215	215	163	2370

It will be observed, that, in preparing this statement, the nosological arrangement of Dr. Cullen has been for the most part observed, and his generic terms employed, with few exceptions, for distinguishing the diseases referred to.

The first of those exceptions, of any importance, relates to continued fever; in recording the cases of which, it seems unnecessary to attempt the division of them into typhus mitior, typhus gravior, and synochus, because no advantage could result from marking a difference among cases of the same epidemic, where the nature and tendency of the disease are alike in all, whatever may have been its exciting cause; however its appearances may be modified by the concurrence

of accidental circumstances; and how various soever may be the requisite mode of treatment.

Synocha, or pure inflammatory fever, unconnected with local affection, is extremely rare in this country, and it is not to be understood that any cases of it are included under the head of Continued fever in this list.

The greatest number of cases of fever appears to have occurred in the months of October and November; but the most fatal season was in the beginning of May, when, after a considerable fall of rain, the weather became for some time excessively hot. The latter circumstance, however, cannot be deemed the cause of this fatality: for during the still hotter months of July and August, the fevers proceeded with symptoms of uniform mildness; and not one of the cases here recorded terminated fatally, until after the weather had become more temperate.

Under the appellation of cynanche inflammatoria are comprehended all cases of both the first and fourth species of Dr. Cullen, as neither of them ever subsists in any considerable degree, without being accompanied by the other; and in milder cases, whether the membrane covering the tonsils, or that part of it which lines the pharynx, be affected with inflammation, the disease is plainly the same.

The case of cystitis was ascertained by dissection. In addition to the symptoms described in Dr. Cullen's definition, it was accompanied by a high degree of delirium, assuming, towards the close of the disease, the character of furor uterinus.

By the term chiragra is meant a disease in which the only symptoms are severe unremitting pain and numbness of the arm, fore-arm, and hand; sufficiently distinguishable from a rheumatic or true paralytic affection, and probably occasioned by a disease of the cubital nerve, similar to that of the ischiadic, described by Cotunnius as giving rise to the nervous sciatica. It is of rare occurrence, but in general extremely obstinate; in some cases yielding to opiates and repeated blisters; in others remaining unaffected by external applications and internal remedies.

The small-pox was last year more prevalent than would be inferred from the proportion which the cases of it bear to other diseases in this list. According to the bills of mortality, two thousand four hundred and nine persons died of it in the course of the year; a number which amounts to seven hundred and eighteen (or nearly one half) more than the average of the five preceding years.

The

The number of cases of catarrhal affections, mentioned as occurring in the early months of the year, is much greater than it would have been, if Dr. Cullen's definition of catarrh had been rigidly adhered to. Under this term are comprehended not only all cases of increased secretion from the mucous membrane of the nose, fauces, or bronchia, whether attended by fever or not, but likewise all the consequences of such increase; as coryza, cough, and dyspnœa, when the latter does not evidently proceed from some other cause, or appear as a symptom of some other disease.

A similar remark is applicable to the comprehensive use of the term "dyspepsia," under which are included all the symptoms enumerated in the definition, whether combined or occurring separately; together with all other effects of indigestion on the system in general, such as headach, vertigo, depression of spirits, &c.

The prevailing epidemics of the summer months were disorders of the bowels, appearing either under the form of simple diarrhœa, or combined with an affection of the stomach, &c. and constituting the more formidable disesse of cholera. Considering how violent diseases of this nature are in climates where the heat of the atmosphere scarcely exceeds that which was experienced here in the last summer, and how little the constitution of the inhabitants of this country is accustomed to such a temperature, we might have expected these cases to have been of the most fatal tendency. This did not, however, appear to be the fact; for in most instances the event was perfectly favourable. Cases of this nature were remarkably numerous from June to the end of September; they were then succeeded by the dysentery, a disease of less frequency, but of much greater violence and obstinacy: this had not prevailed in London for some years before, but it resembled, in a very striking degree the dysentery so well described by Willis and Sydenham, as being epidemic here in the year 1670*, and by Sir George Baker as occurring in 1762. A particular history of it here is rendered unnecessary, not only by this close resemblance, but by the very ample and accurate description of it, as it appeared last year, given by Dr. Willan

* It has been already remarked, that the small-pox was last year unusually prevalent in London; and it is worthy of notice, that Sydenham mentions a similar circumstance to have occurred in the two years preceding the appearance of the epidemic dysentery which he describes. In that period, he says, "Variolæ plures in urbe adgrediebantur, quam umquam alias, quantum ego memini, seu prorsum spectes, seu retro."

in his Reports on the Diseases of London, just published. Although, when properly treated, it was not attended by immediate danger, it has appeared, in some instances, to lay the foundation of a painful, tedious, and fatal disease, occasioning ulcerations of the intestines, and terminating with hectic fever.

In the cases referred to under the title of "hydrops universalis," it is to be understood that at least two of the next mentioned species of dropsy concurred.

There is a class of diseases, especially numerous in every populous town, of which it is not possible in this statement accurately to distinguish the genera, because no names which could be assigned to them would be generally connected with any distinct ideas. It seems, therefore, preferable to speak of them under the appellation (which cannot be misunderstood) of chronic cutaneous eruptions, until the completion of a scientific arrangement of them, formed on a comprehensive plan, and founded on observation and experience, shall have removed the ambiguity which has hitherto prevailed respecting their nomenclature. Such an arrangement has been undertaken by a Physician eminently qualified for the task; and if the sequel of his work, "On Diseases of the Skin," shall be as valuable as the part already published gives reason to expect, little will remain to be desired in this branch of nosology.

It may be proper to observe, that the term "fever," as applied to the diseases of infants, is not confined to its strict nosological sense, including only those in which it is truly idiopathic, and independent of primary local affection. It is indeed probable, from the analogy of those cases in which the cause exciting it is manifest, (as worms, dentition, &c.) that the fever of infants is almost universally the effect of local irritation. In their system, however, the various shades of disease are, in general, so ill defined, as to frustrate all attempts to distinguish them with accuracy; and the extreme irritability of their habits renders them so liable to be disordered by very slight causes, that a febrile state is often induced, of which the most minute investigation cannot discover the precise origin. In this list, therefore, all diseases of infants attended by fever are included under the general term, "febris infantilis," except in the cases just alluded to, where the cause of local irritation, of which it is symptomatic, is manifestly discernible.

The number of cases occurring in each month, and of those of each disease in the year, is specified for the purpose of facilitating comparison.

Art.

Art. 16. *A List of Cases which have occurred at the Finsbury Dispensary during the last Month; with general Observations on the Diseases in London.* By JOHN REID, M. D. Senior Physician to the Dispensary.

	Number of Cases.
HYPOCHONDRIASIS and dyspepsia	36
Asthenia	59
Hysteria	2
Epilepsy	1
Vertigo	1
Cephalæa	3
Anasarca	5
Infantile diseases	23
Chronic eruptions	19
Continued fever	46
Erysipelas	7
Cynanche tonsillarum	2
Pneumonia	1
Phthisis pulmonalis	4
Cough and dyspnœa	23
Diarrhœa	14
Chlorosis and amenorrhœa	19
Menorrhagia	10

It is generally supposed, that what are called nervous affections, are almost exclusively confined to the superior orders of society; so far, however, from being the exclusive property of the rich and the luxurious, they appear, in some shape or other, to prevail in an equal proportion among the humblest classes of the community. The nerves of the poor are subject to the same morbid vibrations, and their imaginations to as great a variety of ridiculous and tormenting caprices, as even those are liable to who move in the very highest circles of the fashionable world. Cases of this description, so great a number of which have come under observation during the last year, have been remarkable for the multiplicity and diversity of their symptoms. Some have apprehended the near approach of death, when, to an impartial observer, they shewed every symptom that could indicate health, or that could give a promise of longevity. Others were continually haunted by frightful spectres: some fancied that there was something alive within them *: others, that they had no in-

* In one or two female cases, indeed, it turned out that *this* fancy was not altogether without foundation.

side,

side, as well as a great number of corporeal deficiencies and complaints which were entirely absent, and the presence of which there was not the slightest reason for suspecting.

No man has greater opportunities of observing the connexion between prevailing diseases and the various states of the weather, than the physician whose humanity, or professional duty, calls him to the relief of those classes of society which are most exposed to its influence. It is the peculiar privilege of dispensary practice, that, being conducted upon a scale of vast extent, it presents an immense multitude of facts, from which this connexion may be easily and satisfactorily traced. To note the effects of climate on the human frame, an inquiry of no less importance in a moral than in a physical point of view, is therefore the especial province of the practitioner to whom this ample field of observation lies open. The general conclusion that will be found to result from the inquiry is, that no state of weather is equally salutary to every variety of constitution, or conducive to the relief of every species of complaint. A mild winter, by removing many causes of illness to which the poor are particularly exposed, is extensively beneficial; while, on the other hand, it is injurious almost to an equal extent, by impairing the vigour of the frame, and thus predisposing to the long train of disease of which debility is the source.

The extraordinary warmth of the present winter, which has in some measure disturbed the natural order of the seasons, has occasioned a corresponding deviation in the usual course and succession of diseases. As the protracted autumn had prolonged the disposition to contagious fever, so the premature revival of spring has diminished the frequency, and softened the severity of pulmonary complaints.

The late frost has scarcely been of sufficient continuance to arrest the progress of febrile infection. Seldom, indeed, does the sudden occurrence of great cold, after a fever has once taken full possession of the constitution, immediately tend to mitigate the violence of its symptoms. This fact may perhaps admit of explanation, when we consider the rooted prejudice of the lower classes in favour of accumulating warmth around a sick bed. Cold weather being always more severely felt on its sudden arrival, than when a gradual approach has prepared for the encounter, will tend, in the former case, to inspire additional anxiety to obtain effectual protection against its attacks. The wretched patient, wasting under a burning fever, will often be overwhelmed by the too officious care of his

his relations, with a superfluous load of bed-clothes, and defended, with ill-judged zeal, from the salutary renewal of air. Heat, thus artificially excited, expends in fruitless waste the last remains of vitality; and an atmosphere, thus stagnant and replete with poison, more fatally malignant than the disease, extinguishes in silence the dimly glimmering flame of life.

Pulmonary complaints have been more frequent since the late alterations in the weather. Few diseases require more sagacity in detecting their nature, or greater accuracy in discriminating their varieties, than those that affect the organs of respiration: in none is it of greater importance that the diagnosis should be just. No mistake is more likely to be attended with such fatal consequence to the life of the patient than an error of judgment with regard to this particular. The same remedy, which will in one case save, would, if applied in another, inevitably destroy. Great attention is requisite to recognise the slow and insidious approach of peripneumonia notha, a disease which, in this city, so often supervenes upon an ordinary catarrh. Hackney-coachmen are peculiarly liable to its attacks. Exposed to all the vicissitudes of an inconstant climate, with little general exercise of body, and with none that tends to preserve the feet in a due degree of warmth, it frequently in them assumes the leading characters of the true pleurisy. A physician, who was to have recourse to the lancet, would learn too late, by the aggravation of every symptom, and the speedy death of his patient, the fatal and irretrievable error he had committed. Bleeding is a remedy seldom applicable to the diseases which afflict the poor of the metropolis. Their general character has been for a long time past complicated with symptoms of debility. Of late, indeed, many causes have conspired, with the warmth of the season, to enervate the once robust habits of our countrymen. Those circumstances which produced such ravages in former years, have, it is true, operated with inferior force. But little has it availed the poor, that they have experienced less inclemency from the elements, while at the same time they have wanted internal support, as well as exterior protection against the vicissitudes of our atmosphere. They have had to struggle with an unprecedented degree of hunger, anxiety, and fatigue. Under the accumulated pressure of hardships like these, is it to be wondered at that diseases have spread so widely, and yielded so many victims to the grasp of Death?

Thus we find that the mournful catalogue of infirmities,

which each succeeding period obtrudes upon our view, in every season, and in every country, still presents the same picture of calamity, still continues to rehearse the same endless tale of human misery!

Red Lion Square. J. R.

Art. 17. *A Peculiarity in the Course of the radial Artery.* Communicated by JOHN YELLOLY, M. D.

To the Editors of the London Medical Review and Magazine.

GENTLEMEN,

THE division of the brachial artery into two branches, near the shoulder, or in the middle of the arm, is a circumstance noticed by most authors who write on the blood-vessels, and does not unfrequently occur. I have observed, however, a peculiarity in the course of the radial artery, which it may be proper to point out, not having been mentioned by Sabatier, Mr. John Bell, or Professor Murray; though known to several gentlemen with whom I have conversed. It is this: that the artery, instead of directing its course, as in the usual way, on the inside of the radius, through the whole length of it, sometimes suddenly turns outwards, about an inch above the place at which the pulse is usually felt, passes over the bone, and, continuing its course along the upper surface or near the outside of it, can be distinctly felt going deep into the space between the metacarpal bones of the thumb and fore-finger. In such cases, a small branch only is found in the usual direction of the trunk; and this branch can be traced towards the palm. It seems to answer to that which is sent off about the place where the radial artery commonly makes its bend outwards, under the tendons of the extensors of the thumb.

I first had occasion to observe this lusus naturæ about three years ago, in a robust man, with a recent attack of fever. The pulse was extremely small, very different from what his general appearance would have led me to expect. That of the other arm was very strong and full. On examining more minutely into the cause of this difference, it was found to be what is above stated. Since that period, I have seen the same occurrence in about eight instances; one of them in a female, and two in the same person.

Phenomena of this kind afford, in general, but little practical instruction. Had I not been aware, however, of this deviation,

deviation, I might, perhaps, in some of the instances, have been induced to draw a more unfavourable conclusion on the nature of the disease than the circumstances warranted.

Bartlett's Buildings, I am yours, &c.
Feb. 16, 1801. JOHN YELLOLY.

Art. 18. *Remarks on an artificial Pupil:* being an Extract from Mr. NORTHCOTE's Surgery, Vol. I. P. 156.

IN a contemporary periodical publication we observe the following remark:

"A *new* operation for restoring sight, in certain cases of blindness, has lately been performed with success by M. Demours, a French surgeon, and which promises to be of singular service in many cases which have hitherto been deemed incurable."

The editor then gives a description of this NEW operation, which consists in making a small orifice through the iris: but, to shew that the idea of this experiment is not quite original, we lay before our readers the subjoined extract, from a work published in 1770. We know likewise, that a similar operation has lately been performed in London.

"There are two cases where an artificial pupil, by slitting the iris, may be of some service: one when the cataract is, from its adhesion, immoveable; and the other when the pupil of the eye is totally closed up by a disorder of the muscular fibres of the iris, which, gradually contracting the orifice, at last leaves the membrane quite imperforate.

"This last distemper has hitherto been deemed incurable. The adhesion of the cataract I have spoken of above, and considered it as a species of blindness not to be relieved; but Mr. Cheselden has invented a method of making an artificial pupil, by slitting the iris, which may relieve in both the cases here stated.

"In performing this operation, the patient must be placed as for couching, and the eye kept open and fixed by the speculum oculi, which is absolutely necessary here, for the very reason I would discard it in the other; since the flaccidity of the membrane, from the discharge of the aqueous humour, would take away its proper resistance to the knife, and make it, instead of being cut through, be torn from the ligamentum ciliare; then introducing the knife in the same part of the conjunctiva you wound in couching, insinuate it with its

blade held horizontally, and the back of it towards you, between the ligamentum ciliare and circumference of the iris, into the anterior chamber of the eye; and after it is advanced to the farther side of it, make your incision quite through the membrane. If the operation succeeds, it will, upon wounding, fly open and appear a large orifice, though not so wide as it becomes afterwards.

"The place to be opened in the iris will be according to the nature of the disease. If the membrane itself be only affected with a contraction, the middle part of it, which is the natural situation of the pupil, must be cut; but if there be a cataract, the incision must be made above or below the cataract, though I think it more eligible to do it above.

"The contracted iris, from a paralytic disorder, is so often complicated with an affection of the retina, that the success is very precarious in this case. The operation, by what I have seen, has answered best in adhesions of the crystalline humour, though, to speak truly, but very seldom even there.

"As I would not mislead any one who should practise an operation not yet much known in the world, I do confess that either the danger of the iris separating from the ligamentum ciliare, or of the wound not enlarging sufficiently, does upon the whole render the event doubtful. I once performed it with tolerable success; but a few months after, the very orifice I had made contracted, and brought on blindness again.

"Since it has been discovered, by the extraction of the crystalline, that a large wound may be made through the cornea without any bad consequence, I should imagine that this operation would be much improved by introducing the knife perpendicularly through the cornea and iris, and cutting both at the same time, so that the incision of the iris should be exactly in the same part and of the same dimension as by the other method.

"Mr. Cheselden speaks of it in these words: 'This operation I have performed several times with good success; indeed it cannot fail when the operation is well done, and the eye no otherwise diseased, which is more than can be said for couching a cataract.'

"From what Mr. Sharp says of this operation, it were to be wished that it was more successful, as it might relieve the patient from the consequences mentioned sometimes to happen in extracting the crystalline humour. Future experiments may perhaps determine its utility."

Since the foregoing article was written, we have been favoured

voured with a sight of the original memoir of M. Demours; from which it appears that the operation in question differs in some respects from that of Cheselden. We therefore subjoin a translation of this memoir from the *Journal de Médecine.*

Art. 19. *Observations on an artificial Pupil made near the sclerotic Coat of the Eye.* By Citizen DEMOURS, Oculist, and Member of the ancient Faculty of Medicine at Paris. Read at the National Institute, on the 26th Prairial of the 8th Year (June 14th, 1799;) and on the 2d of Messidor following, at the Society of Medicine.

(Illustrated by an Engraving.)

CITIZEN Sauvages, of Ham, in the department of Somme, experienced, in the 22d year of his age, in the month of Floreal (April) of the 1st year of the republic, violent and repeated attacks of ophthalmia, accompanied by an abscess in each cornea, which suffered the whole of the aqueous humour of the eyes to escape at different times; and was followed by an opacity of the whole of the cornea of the right eye, and of four fifths of that of the left. The iris of each eye remained applied to the concave surface of the cornea. There did not exist, in consequence, any vestige of the aqueous tumour, and the patient was, during four years, in a state of the most complete blindness, in spite of every remedy which was employed.

The right eye presenting no resource, I conceived the idea of opening an artificial pupil in the superior and external lateral part of the iris of the left, near the sclerotica, the only place where the cornea had preserved its transparency, in a small portion of its extent.

On the 26th Germinal of the 5th year (June 14th, 1796,) I plunged a knife *(bistouri à cataracte)* into the transparent part of the cornea, and into the iris, near the sclerotica, taking care to make the opening in the iris a little lower than that of the cornea, for the purpose of preventing vision from being obstructed by the cicatrix which the incision in the cornea would leave. I then introduced into this opening one of the blades of a pair of very delicate straight scissars, which penetrated a little into the vitreous humour. The other blade was pushed between the cornea and iris, which at this place was only applied, but did not adhere to the concave surface of the cornea; I cut off a small shred of the iris, nearly of the size and form of a grain of sorrel, by means of

two

two strokes of the scissars, and sight was immediately restored.

This pupil has remained more than three years, and nothing has occurred to make me apprehensive of its closing. The rays of light enter immediately into the vitreous humour, without passing through the crystalline, which does not extend so far; and which every circumstance too would lead us to believe was opake, from the extreme confusion that all the parts of the eye experienced during the suppuration of which it was the seat: vision is improved by means of a convex glass, with which Citizen Sauvages reads with facility. This lens is the most convex of those used by persons who have undergone the operation of the cataract; which proves, without doubt, that the crystalline is of no use in this eye.

The fact here stated, may encourage us to try a similar plan in certain cases which appear to be hopeless. An inspection of the eyes of Citizen Sauvages, who is now present at the sitting of the National Institute, may readily convince us, that all those whom he had consulted, and who had unanimously considered him as irrecoverably blind, an opinion which I myself for some time entertained, were warranted in their judgment by appearances. We find in many authors examples of the pupil being shut up from different causes, and opened by operation. This has been done by Cheselden and others. The iris also is often detached from the sclerotic and choroid coats, or is separated by a blow, or an absess of the cornea; and there exist observations of this kind, which prove, that patients have regained their sight by means of this new pupil, notwithstanding the occlusion of the natural one. I have seen many instances of this separation of the iris; I have sometimes been obliged, in performing the operation of the cataract, to extract it by an opening which I have made in the iris, when that membrane adhered too closely to the capsule of the crystalline; and the result has sometimes been a new pupil, which has subsisted after the closing of the old one, and has answered the purpose of vision tolerably well.

At other times I have seen the lens detach the iris from the sclerotica at the lower part, and come out by that opening, which preserved itself, and formed an artificial pupil. Mademoiselle de Chambellan had for seventeen years a cataract in the right eye; which had contracted adhesions so strong, that, during the operation, which I performed on the 2d of October 1787, in the presence of Citizen Sabatier, the crystalline, instead of coming out by the pupil, detached the iris from the

sclerotica

sclerotica at its lower part: after taking the opinion of Citizen Sabatier, I facilitated its egress by this opening. The old pupil remaining dim by the opacity of the capsule of the crystalline, Mademoiselle de Chambellan has seen very well ever since by this new opening, which still remains in the form of a crescent, the other eye being quite blind.

A very small opening has not, however, till now been made in the iris near the sclerotica, when the eye has been entirely deprived of the aqueous humour, the iris applied to the concave surface of the cornea, and a fifth part only of the extent of the cornea near the sclerotica remained transparent. I have several times made an opening in this same part of the iris, since I performed the operation on Citizen Sauvages: but, before submitting these cases to the examination of the National Institute, and the Society of Medicine, I thought it proper to allow some time to pass, that there may be no danger of this opening being closed; an apprehension arising from its smallness, the necessary consequence of the narrow space on which I had to operate.

I propose making in this manner a new opening in the iris between the edge of the crystalline and the sclerotica, not only in cases which have been considered as without resource, such as that of Citizen Sauvages, where the cornea preserved its transparency in a part of its extent; but wherever the passage of rays is intercepted, whether by a cicatrix situated in the centre of the cornea by adhesion of the edges of the iris to the capsule of the crystalline lens, or by an opacity of this capsule and of the lens itself, where the smallness of the pupil, or some other causes, render the extraction of that membrane and the lens too difficult.

The rays of light, on entering the eye, undergo a first refraction when they pass from the air into the transparent cornea and the aqueous humour; they experience a greater in passing through the crystalline; and finally, the alternate contraction and dilatation of the opening of the iris, known by the name of the pupil, suffer only the quantity sufficient for tracing the image of the object distinctly upon the retina, to enter into the interior parts of the organ. It is known that this opening dilates on exposure to a moderate light, and contracts by a more vivid one.

What is astonishing in the result of Citizen Sauvages's case, is, that he knows a person at the distance of fifty paces, and that his vision is very clear, notwithstanding the defect of motion in his very small artificial pupil, its distance from the

centre of the ball of the eye, the total privation of the aqueous humour, and the want of convexity of the cornea; which, having been pierced at several times, by different abscesses, and remaining covered with white cicatrices through four fifths of its extent, is rather flattened, even in the part which has preserved its transparency.

Description of the Engraving of an artificial Pupil. (See p. 67.)

A. A small cicatrix on the cornea near the sclerotica, occasioned by the bistory, which was introduced from above downwards.

B. The pupil, formed by the operation.

C. The cornea become white through four fifths of its surface, interspersed with varicose vessels, and blended with four fifths of the extent of the iris.

Art. 20. *Notice to Readers and Correspondents.*

1. THE increasing demand for thier successive volumes, in every quarter of the globe, forms a strong ground of encouragement to the proprietors of this Review. They have, therefore, continued to supply their friends with a larger quantity of letter-press, in each of the monthly Numbers, than is given in any other medical journal: but the additional rise of 40 per cent. which has been *recently* made on paper and printing, (not to mention an equal advance made a few months ago,) renders it absolutely necessary to diminish their expenses. In order to accomplish this object, without encroaching on the privileges of their readers, they have determined to reduce the number of pages; but, at the same time, to augment the quantity of matter, *at least one fourth*, by adopting a closer style of printing, according to the present specimen: so that, upon the whole, an actual advantage will thus be obtained by the reader.

2. Our correspondent at Quebec is requested to make application to Mr. CALLOW, or any other of our publishers, for the fulfilment of his wishes.

3. The communication of MEDICUS will be inserted next month, provided he favours us with his name in the interim.

4. Mr. PEARS's letter, &c. will be acceptable.

5. We thank Dr. STRUVE of Görlitz for his obliging proposal, and shall be happy to comply with his desire. Our last volume will immediately be forwarded to Brunswick.

6. Mr. BLAIR's paper will be inserted in our next Number, with a letter from Mr. CHEVALIER on the same subject.

*** The Engraving of an artificial Pupil, &c. must face page 67.

THE

LONDON MEDICAL REVIEW

AND

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ANALYSIS OF BOOKS.

ART. I. *Communications respecting the external and internal Use of Nitrous Acid; demonstrating its Efficacy in every Form of Venereal Disease, and extending its Use to other Complaints: with original Facts, and a preliminary Discourse, by the Editor,* THOMAS BEDDOES, M. D. Octavo, 188 pages. JOHNSON, London. 1800. Price 5*s*.

TO an unprejudiced observer, it would seem no very difficult task to determine, by an appeal to facts, the efficacy of any one remedy in a given disease. Such, however, is the uncertainty of physic, that even this simple theorem is not readily susceptible of complete proof. "Mercury," as Dr. Gregory, in his late Memorial, observes, "has been used nearly three hundred years for the cure of the lues venerea; and though, strictly speaking, not universally with success, yet with success infinitely more general and more complete than we have experienced from any other remedy in any other disease. But during all that time it has been the source of incessant and keen disputes; and at this hour the disputes about it are more violent than ever they were." The author of the present work, professing, in his title, to bring forward demonstrative evidence of the superior efficacy of the acid in during

curing every form of the disease, led us to hope this controversy would now be settled; but we were soon undeceived in that point, by observing the prejudice under which he manifestly labours. The promulgation of truth requires not such sentences as the following:

"Under correction of persons who know the world, and at the risk of an attempt on the part of a second adversary, *as despicably malicious as the first*, to raise the hue and cry against the slanderer of his brethren, I repeat my former remark on the effect of interest. I say that some surgeons, from an apprehension that their wheels can no more go on than the mines of Spanish America, without the aid of the slippery grandson of Atlas, will give a rival remedy no trial, or, what is much worse, an imperfect trial. And these surgeons will as often be those who stand at the top of the profession as those at the opposite extremity."

If the author's mind be of that complexion which can find no other term for the conscientious support of opposite opinions than "despicable malice," it is but fair that in the next line he should acknowledge his own claim to the title of a "slanderer of his brethren."

In the argument which Dr. B. repeats with so much exultation, viz. that surgeons reject this new mode of cure, because it would tend to diminish their profits, we can discern no force. To the patient it surely signifies little whether he be cured by mercury or by an acid. When a person, labouring under a disease which he knows from report to be subject to the control of medicine, applies to a practitioner, he expects indeed to be cured, *cito, tutè, et jucundè*, if possible; but he inquires not into the mode by which that cure is to be effected. For his own sake the practitioner will cure him as speedily and pleasantly as he can, and the patient will reward him accordingly. But wherefore all this acrimony? To an eye moderately exercised in discrimination, it betrays an eager sense of bitter disappointment; it is the language of a mind struggling against the convictions of its own defeat.

In the attempt to illustrate his subject by the metaphor of the apothecary, and his shop, and his nostrums, the Doctor is rather unhappy; the "mutato nomine de te fabula," &c. rushed so strongly on our mind, that it is surprising it did not occur to the author.

Ever since Dr. B. undertook to furnish the world with new lights in the science of medicine, we have observed frequent displays of such vague phraseology as follows:

"In

"In a question, therefore, such as it has been my lot to agitate before the public, no requisite is more indispensable than enlarged views of remedial agency. I intend soon to treat the subject at large." He gives us an endless succession of promises, which have only been followed by a perpetual series of diffuse and desultory pamphlets on doubtful subjects.

Our author inquires, "what state, what potentate, what association, what wealthy individual, has thought this object (the science of animal nature) worthy of the smallest sacrifice, even for the chance of finding, in the laws of his existence, preventives for evils that may become any day irremediably his own?" Surely this is but an ungrateful return for the means which have supplied the foundation of the aërial castles of Clifton! If the superstructure has failed, let him look elsewhere for the cause of that failure; or perhaps it is his peculiar method of beating up for recruits. If it be, we can only say, that it is not very likely to answer his purpose.

"No proper search," adds the Doctor, "having therefore been made, it may in all reason be concluded, that little can be known in comparison of what exists in the great storehouse of nature. So it is more probable, that there are twenty antivenereal remedies, in general, as good as mercury, and of course in particular cases better, than that there are none."

Here is indeed a most singular and extraordinary mode of reasoning: so, because "no proper search has been made"—granting the supposition—therefore "it is probable that there are twenty remedies to be found;" and because these twenty remedies are "in general as good," of course "they must in particular cases be better." This may be demonstration, for aught we know; but if the writer were to hunt for a diamond mine (at the bottom of St. Vincent's rock, for example) upon the same principles, we apprehend that the false glitter of Bristol stones would be the sole reward of his labour.

The author brings forward the following case with considerable triumph. To this case, however, we object that it is anonymous; but, admitting its authenticity, the relations of patients themselves are always to be suspected, none being so ill qualified to judge of the nature of diseases as those who are suffering under them. By such kinds of testimony, the infallibility of every nostrum advertised in the public prints is supported.

"I shall quote," he says, "a pretty striking instance of the mischievous effect of the false ideas that have been propagated, with mischievous industry, respecting relapses after the new

treatment. An officer in the ——— regiment of militia had repeatedly experienced many returns of venereal ulcers in the throat, at short intervals, after they had been healed by mercury, and on each repetition of this medicine his constitution suffered so much, that his medical advisers no longer could offer him any reasonable hope of benefit from a return to his former course of medicine. On proposing himself to try nitrous acid, the surgeon of his regiment assured him, that if the complaint should be removed for a short time, it would still return.

"At length, suffering and anxiety induced him to consult me. I need hardly state, that I advised the trial of the acid: after an interval of several months, I had the satisfaction of receiving the subjoined letter.

"To Dr. Beddoes.

"'Sir, *Dublin, Jan. 14th*, 1800.

"'THE least return I can possibly make for your kindness 'in answering my inquiries relative to the nitric acid, is to 'give you information, that apparently it has perfectly cured 'me of the remains of venereal poison lurking in my consti-'tution, and attacking my throat: I pursued the use of it, 'with very little remission, near fourteen weeks, increasing 'the dose gradually, until, for the last ten days, I took three 'drachms in a quart of water, without the least inconvenience 'to my teeth, gums, or stomach. By the advice of an emi-'nent surgeon of this city, I then dropt the use of it entirely, 'as, in the course of the acid, I had every reason to suppose 'I had a stricture, which originated in a very bad and protracted 'clap cured two years before. My throat continues perfectly 'well, and, as I am assured, free from any appearance of ve-'nereal infection, while my general health is much the same 'as previous to the use of the acid. If venereal symptoms 'should never recur, my restoration to health will be attri-'butable to the use of the acid only'."

The author, it will be observed, adduces this as a case of *venereal* ulcers in the throat; whereas, it seems rather to have been an instance of the aphthous sore throat, frequently occurring in consequence of the long-protracted use of mercury; and which is readily cured by sarsaparilla, milk diet, sea bathing, or whatever tends to restore the general health. Such cases are often mistaken for venereal, to the great detriment, and, we fear, sometimes the death of the patient.

This

This is not the only case where Dr. Beddoes shews himself deficient in that accurate discrimination of the symptoms of venereal complaints which he ought to possess, to constitute him a fit judge in the present controversy. His situation probably does not furnish him with a sufficiently extensive field of experience.

From several experiments, the author imagines he has ascertained that nitric and sulphuric acids, applied externally in form of baths, affect the mouth in a similar manner with mercury. This fact, he thinks, affords a fair analogy for supposing a similarity of action on the system. The following are among the experiments by which he supports his opinion.

" *Experiment* 11. The author used the bath six times; he stayed in from an hour and a quarter to an hour and a half; each time his skin smarted more than the former, but there was hardly any eruption. A metallic taste and soreness of the teeth were slightly felt after the two last immersions. An acute illness, brought on by exertion during the excessive heats of August, frustrated his design of pushing the experiment to a greater length.

" *Experiment* 12. ' At the suggestion of Dr. Beddoes, with ' the view of ascertaining the effects of the experiment, being ' in perfect health, I began, on August 12th, to use the acid ' bath. During the interval between August 14th and August 20th, I bathed once every day (generally remaining in ' the bath for an hour,) without perceiving any notable effects.

" ' On August 21st I neglected to bathe; on the 22d I ' bathed both in the morning and at night, remaining in the ' bath nearly an hour and three quarters each time. On this ' day slight eruptions began to appear on parts of the skin: ' on the 23d I bathed twice; my gums, examined in the ' morning, appeared redder than usual about the bases of the ' teeth; towards the evening they became a little painful: on ' the 24th the redness and soreness of the gums were increased, I thought the secretion of saliva greater than usual; ' my breath had no fœtor. At this time I was obliged to ' desist from the experiment, in consequence of a violent diarrhœa, which had been slightly felt during the two preceding days, and which was probably occasioned by causes ' unconnected with the acid bathing.

' *Sept.* 1, 1800. ' H. Davy'."

As a further illustration of this subject, we shall give an extract from Dr. Scott's letter, dated Bombay, December 17, 1799;

1799; where he mentions the efficacy of this treatment in the syphilis and elephantiasis.

"*Syphilis.*—I can have no doubt but that the nitric bath will become a very useful agent for the cure of syphilis. I believe that many of the failures of the acid, in curing lues, have arisen from too small a quantity of it being in the habit. Although it is certain that it cures syphilis without affecting the mouth, yet in general I do not find that the symptoms in bad cases begin to yield till the mouth be considerably sensible of it. It is desirable, even in recent cases, that the affection of the mouth should be apparent, as an index of the quantity of acid that has been absorbed. We have found that the bath alone removes very happily, not only the primary, but the secondary symptoms of lues. In obstinate cases the body may be bathed in the acid several times a-day; on other occasions it will be sufficient to keep the legs in it for half an hour at a time, and to repeat this four, five, or six times a-day, according to circumstances. I have seen chancres, buboes, &c. very readily go away by bathing the lower extremities in this manner, without any application to the parts affected. When the most powerful effect is required, the body may be frequently immersed in the acid bath, of as great a strength as the skin can bear it, while it is taken internally in as large a quantity as the stomach will permit. By varying the means of absorption, by giving over the use of the acid for a time, and by persevering for months together, I have certainly seen cures produced where mercury had entirely failed, and where I think it never would have succeeded. The acid bath, as I suppose cold water would do in the same circumstances, is apt to produce a kind of rheumatism which resembles venereal pains. I have observed that these go off in a short time by giving up the use of the bath.

"The result of our experience of late seems to be, that by the bath, or by combining the internal use of the acid with its external application, we succeed in hopeless cases where mercury had failed; in other instances, however, of a similar nature, I have failed by the acid. When the bones are highly diseased, a long time is required to restore them to health, even after the poison of syphilis is neutralized. I think I have observed, in some instances, that the immediate relief from pain is not so decided from the acid as from mercury, even where its permanently good effects have been far more considerable.

"In recent cases of syphilis we have been much more successful;

cessful; I am hardly able, in truth, to record but very few instances of failure. Some cases have been more troublesome and more tedious than others, but they have given way in the end.

"With respect to the permanency of the cures by the acid, we have reason to think, that at least they are not less so than those from mercury; but I make it a practice, even in the recent disease, to affect the mouth by it, or to produce some very evident affection of the system.

"I have been blamed for giving too warm a testimony of my success. *I have, however, nothing to detract from the first letter that I published on the subject.* I have always allowed, that where mercury had failed, I have too often failed with the acid. I hope that by the assistance of the bath we shall be still more fortunate in future, for it has put us in possession of a power that may be much increased or diminished, according to the quantity of resistance.

"*Elephantiasis.*—This shocking disease is not uncommon here, and we often see poor wretches who linger under it for years together, before the welcome deliverance of death. The Indians give arsenic for it, and occasionally with success. They do not communicate it to their wives. They are avoided chiefly from their disgusting appearance, or the ill smell of their sores and breath.

"Some months ago I put a man, with severe symptoms of the elephantiasis, into a nitric bath. In less than six weeks his skin became softer, and his limbs less stiff. He has continued the bath almost ever since, with a slight affection of the mouth. The various ulcerations that were on his hands and feet, and other parts, have disappeared. His skin is pliable, and nearly of an equal thickness every where. His health is good, nor can I observe much appearance of disease about him. He has lost the leonine aspect which he had in a frightful degree. This is the only case of elephantiasis in which I have tried the bath; but it is a strong one, and is conclusive, so far as a solitary instance can be so."

That a smaller quantity of mercury suffices to cure the disease, when conjoined with the liberal use of acids, is an important fact, which appears not improbable from the following statement of Dr. Beddoes:

"In addition to the analogies of hepatitis and dysentery, it will, I think, be allowed, that if less mercury cures or salivates, when mineral acids are used at the same time, this is some argument in favour of their similar powers. Here we

find opposition of testimony:—that on the affirmative side is strong. 'In several instances,' says Dr. Currie, 'where, 'after a course of nitrous acid, it has been thought advisable 'to have recourse to mercury, a very small quantity of the 'ointment (in one case two drachms only) has produced com- 'plete ptyalism. This has occurred so frequently, that I do 'not think the conjunction accidental.' (*Collection*, p. 134.) My acute correspondent X. Y. Z. deduced the same conclusion from several cases, adduced as unfavourable to nitrous acid. (Ibid. p. 101—155.) Dr. Mitchell, of Chatham, who was first a sceptic, and afterwards an unbeliever, asserts, as his final opinion, that 'a smaller quantity of mercury seems 'to effect a cure, and the appetite and general health of the 'patient to suffer less than when mercury alone is used.' In one of Mr. Hammick's letters will be found a remark, founded on his experience in twelve hundred cases, that probably the conjunction of mercury and nitrous acid would be preferable to a simpler plan. Dr. Rollo, who seems to have put this idea to the proof much more fully than any other person, has favoured me with the following summary of his observations:

"LETTER from Dr. ROLLO.

"'DEAR SIR, *Woolwich, 14th June* 1800.

"'THE information you have communicated to me, that 'you were furnished with materials, confirming many inte- 'resting facts relative to the efficacy of nitric acid, as an anti- 'venereal, and of curious particulars with regard to its ope- 'ration, has not failed to afford me satisfaction; especially as 'I continue to hold the opinion, that the new remedies de- 'serve every commendation.

"'That the nitrous acid, &c. can remove both primary 'and secondary states of the venereal disease, are truths esta- 'blished, and partly acknowledged.

"'But whether these remedies will entirely supersede mer- 'cury, remains to be ascertained.

"'The result of my experience and observation since the 'second edition of my work on the Diabetes Mellitus, &c. 'inclines me to think that a combination is the most effectual 'and certain plan of cure.

"'Such combination, consisting of small quantities of 'mercury, and considerable doses of the nitrous acid, or oxy- 'genated muriate of pot-ash, daily exhibited; or commencing 'with mercury, or the new remedies, and pursuing either for

'a fort-

'a fortnight, then discontinuing the one which may have been 'employed for the same time, and so on alternately.

" 'Both these methods I have adopted with success, and 'have not observed a return of the disease in any form. 'Though I cannot determine entirely the most preferable, yet 'I am disposed to think the alternative mode will ultimately 'prove the best of the two. By either, the disease of remedy 'simply, or the disease arising from a combination of the effects 'of the remedy and the disease, have not been produced.

" 'The digitalis is a remedy of great concern: to its utility 'we can add our testimony, in many cases of ulcerated lungs, 'of dropsy with increased action, &c.

" 'I have had more experience in corroboration of what 'has been advanced on diabetes mellitus, which, with farther 'accounts of our practice in lues venerea, will form a supple- 'ment to my work (it is probable) in the course of next 'winter.

'I am, &c.

'*To Dr. Beddoes.* 'J. Rollo'."

It is impossible, in this letter from Dr. Rollo, not to notice a considerable abatement of the confidence with which he formerly stated the curative effects of the acids. The reason afterwards assigned for trying the acids, in combination with mercury, does not appear adequate to explain or justify the dereliction of a remedy so much more easy to the patient, provided it be equally efficacious in curing the disease.

Much is said in the course of this work on the subject of relapses, after the use of mercury and of the acids. Of the administration of the former of these remedies, we have had considerable experience, as well as some little of the latter; and we can conscientiously declare, that we have never seen any cases of relapses, in private practice, after a fair and judicious administration of mercury. We are therefore inclined to believe, that, when they do occur, some blame must attach either to the conduct of the patient or the practitioner, or his assistants.

The author, being a great master of style, and fertile in contrivances, leaves none untried that can aid his present purpose, as the following story will testify:

" The comparison of Dr. Gilby's facts with those published by Dr. Rollo, is curious; and I flatter myself that a collection of such examples will change the taste that has hitherto prevailed for theorizing in medicine.—In my youth I remember

to have been often told of a Shropshire 'squire, whose humour it was to send his servants out in the evening upon the high roads to invite Welsh travellers, mounted upon their little ponies, to his house. While the rider was entertained with the greatest apparent cordiality, persons in the stable were busy sewing up the steed in an ass's skin; and the joke consisted in the half-intoxicated master's inability to recognise his own beast in the twilight. A difference in the two cases must, however, be acknowledged. Our theorists go about their work with all gravity; and nature, on her part, does not stand quietly like the poor poney to be stitched up in the ass's skin."

Probably it is owing to that dulness which obfuscates the intellects of every one who has attempted the plodding drudgery of reviewing; but we cannot perceive how this tale bears upon the subject. Nay, had not the Doctor, like an hackneyed story-teller, laid hold of our button, and, after a large dash and a space to be filled up, we suppose, with a hearty laugh, told us, in capital letters, that it was WIT meant to ENLIVEN, we should have passed over the joke without even perceiving it; and after all, we reckon it but a sorry one.

Of the same complexion is the wretched vulgarity about the Irish student, the Scotch professor, and the *marcray*. In a work connected with science, this is miserable trifling, tending to impress the reader with an idea, that, even in more important points, the author is not serious.

The virulent attack on the moral character of poor Mr. Brown, a man infinitely more weak than wicked, and now no longer able to defend himself, might well have been spared.

The letter to Mr. Pearson, we shall lay before our readers, as conveying a clear and concentrated view of the whole object of the present publication. Sincerely do we hope that the author's challenge thrown out in it may be accepted, and an end be at length put to a controversy, which, more than any of the multitudes which have preceded it, tends to disgrace the medical profession.

Copy of the Letter to Mr. Pearson.

"SIR,

"I SHOULD in an endeavour to make any impression upon you, by expressing my regret that you should have joined your authority to that of those who deny the antivenereal power of acids. You are satisfied with your own conclusions: to me they appear unwarrantable. In my apprehension,

sion, you ought to have inferred, that certain saline substances are true antisyphilitics, but that they fail in some cases, because we do not possess them in a sufficient variety of forms. Indeed, at the conclusion of your work, you do make a small concession of this kind in favour of nitrous acid.

"But it is useless to multiply words; and you have proved yourself too candid and inquisitive to oppose the accumulation of facts. But let the accumulation of facts be at last effectual: let it relieve from their perplexity those who are embarrassed by contradictory testimony: let it put our conclusions above the cavils of men whose productions are stained with the variation of each soil in the districts of wrong-headedness, misrepresentation, and chicane. I do not, indeed, yet pretend to know the power of acids, in comparison with that of mercury. But I affirm (what you deny,) *that acids will cure the venereal disease, both in its primary and secondary form;* and that their pretensions ought to be contrasted with the performances of mercury. I challenge you to co-operate with me in bringing this point to an authentic determination. Do you select a certain number of patients, labouring for the first time under the symptoms of secondary lues, and such as have taken no mercury, or none lately. If you accept my challenge, I request you also to let two or three other surgeons attest the cases.

"I challenge you further to select a number of other patients, who have relapsed after one or more apparently proper courses of mercury. The writings that have appeared during the present controversy swarm with relapsed cases. From this and other sources of information, it appears to me, that, after a succession of relapses, small dependance is to be placed on mercury; for a single course does not secure the patient, and often the medicine cannot be repeated, because it saps the constitution with little mitigation of the disorder.

"I need not say, that you should be nice in your choice. We must have persons of regular conduct, and concerning whom we may be able to obtain information at a considerable distance of time. Such as would be content to live at their own expense, and to receive gratuitous treatment, would be most desirable. The expense, however, of maintaining a few patients, shall not be an obstacle to the experiment. I hope to find persons willing to join their contributions to my own, for the sake of solemnly deciding so great a question.

"I should be extremely obliged to you for the communication of means for guarding against the secret use of mercury.

I will speedily acquaint you with such as appear to me the most effectual, with other particulars. And whether you concur with me or not, I will endeavour to execute this scheme. In such a problem, when I think myself within a single step of incontrovertible certainty *, I am not disposed to stop short.

" I do not expect from you the objection that acids may perhaps be permanently effectual in India, but not in England. The necessity of swallowing a large bulk of liquid is, indeed, more severely felt in colder countries; and I am happy that we have obtained the convenient resource of external application, a method which I expect will daily come more and more into use, with other medicines. But, indeed, I believe the army of reserve of affirmative facts in Europe is too strong for any one to venture an attack in this quarter.

" In consenting to confine the experiment to secondary cases, do not imagine that I admit the insufficiency of primary cases, in a certain number, and of a certain inveteracy, as a test for antivenereal remedies. Whatever will cure such primary cases as I have seen cured by acids, such as have been cured in Plymouth Hospital and elsewhere, will also cure secondary cases. These, indeed, seem sometimes to be as much exceeded in intensity by primary cases as they may themselves exceed primary cases in extent.

" Should it prove that the host of observers, who affirm the power of acids, have not been deceived, I will not dissemble with you that I have further views. I hope, in this case, that some spirited inquirer will have the courage to try, by inoculation upon his own person, whether certain acids diluted only so far as to be tolerable for a short time by any surface of the body, will not destroy the specific quality of venereal matter. In the acid that should do this, we might possess the double advantage of rendering innocent this morbid poison, and of determining the living parts to an action different from the venereal action. Such a substance, especially if it be at the same time volatile, may furnish an instrument effectual for diminishing the frequency of the venereal disease.

" I have not taken upon me thus to throw down the gauntlet, as thinking I exclusively possess the medical prowess necessary for the achievement; but it is the part of the upright

* In another part of his work, the author modestly says, " We have arrived, if inquirers ever did arrive, at INCONTESATBLE CERTAINTY." Page vi.

and

and consistent man not to shrink from the strictest probation of what he believes true and useful.

" One of those surgical sages, who, with scarce any sanction from experience, have stepped forward to pass a general condemnation upon the acids, remarks, that 'what was done 'successfully at Plymouth, at Woolwich, at Bristol, &c. 'ought to have been done at the Lock Hospital; for truth is 'the same every where.' I have shewn, from the evidence of dates, that, in the first decision at the Lock Hospital, truth was not waited for. And if it may be supposed that the nature of the venereal disease is the same within the limits of our island, still the art of treating it by the new remedies may have differed as widely as the climates of Greenland and Bengal. But if you send me triply and quadruply attested London cases, and I effect cures at Bristol in the most public and authentic manner that can be devised, will not the suspicion that, in the event of contradiction, always attaches to individuality and locality, inevitably vanish, and with it every other form of doubt be dissipated? But, indeed, upon the whole, there already appears to have been a much more public inspection of the successful cases than of the unsuccessful.

" I am, Sir,

" *Rodney Place, Clifton,* " Very respectfully yours,
Oct. 10, 1800. " THOMAS BEDDOES."

The greater part of this publication consists of cases of the venereal disease, of scurvy, and of elephantiasis, communicated from India, in which the acid treatment has been generally successful. But into the detail of these cases our limits forbid us to enter. *Valeant quantum valere possunt.*

To the author's concluding proposal, for the preservation of accidental observations in medicine, we think there are many objections. We agree, however, that a forged medical report is a drawn dagger which the arm of a credulous physician may any day plunge into the heart of his defenceless patient.

" The author has heard some inconsiderate wits avow, that they have transmitted to the venders of quack medicines imaginary cures, attested by fictitious signatures; and it is not without apprehension, (he says,) from the propensity of men to display ingenuity, and to relate wonders, that he announces the present design."

With such a conviction as this upon his mind, how can the Doctor condescend to increase the temptation to forgery, by facilitating the means of circulation?

ART.

ART. II. *Recueil periodique de la Société de Médecine de Paris.* Nine volumes. Octavo. 1796—1801.

THE first volume of this periodical work appeared in 1796, when BACHER's Journal de Médecine was discontinued. Since that time, one number of the present collection has been published every month. It is the joint performance of the most eminent physicians and surgeons at Paris, and indeed throughout France; for the Society is composed not only of resident members, but of a great number of corresponding members also. There are, besides, many foreign associates.

At its first institution, the object of the Society was, to collect scattered facts, to give an account of new discoveries, to institute or repeat experiments tending to elucidate the same, to propose interesting subjects for inquiry; in a word, to scrutinize and confirm new doctrines, by submitting the practical facts on which they are founded, to the test of analysis and free discussion. The number published monthly by the Society exhibited the result of their labours, with the cases and observations received, the different points of theory not yet sufficiently established, notices of and extracts from new works; and lastly, an account of the communications from correspondents, with the names of the authors.

To this plan the Society adhered until the completion of the eighth volume, when their views became more extended. The title of the work remains the same; but it is now not confined to the labours of the Society alone, but is to be considered as a channel of communication open to all individuals of talents in the medical profession, as well as to all bodies of men, united into societies for the improvement of physic and surgery, whatever be the country in which they reside, or the language which they speak.

In conformity with these expanded views, they have consolidated with this work the Recueil periodique de Litérature médicale étrangère, formerly published separately by SEDILLOT; and they mean to convert to their use the different medical reviews and journals, which are printed in France*: viz. Bibliothèque Germanique medico-chirurgicale, par BREWER et DE LA ROCHE, à Paris; Bibliographie analytique

* The following periodical publications have been discontinued; Journal de Santé et d'Histoire Naturelle, par CAPELLE; Journal des Méres de Famille, par GAILLEAU; Essais de Médecine, par WATON et GUERON; and lastly, Journal de Médecine populaire, par VERDIER.

de

de Médecine, par BAUDIN, à Chateau du Loir; Journal de la Société de Médecine de Lyon, par PITT, PETIT, et MARTIN; and Journal de Médecine, Chirurgie, et Pharmacie, par CORVISART, LEROUX, et BOYER, à Paris. In addition to these, the Society will also take cognizance of the medico-pharmaceutical papers which often appear in the Annales de Chimie, (to which has lately been joined the Journal des Pharmaciens,) in the Journal de Physique, and in some other periodical works on philosophy and science in general: so that, to use the words of the editors themselves, this collection embraces all other medical collections, and may therefore be considered as Annals of the healing art.

We shall occasionally lay before our readers select cases and observations from this extensive and useful work.

ART. III. Dr. CHISHOLM's *Essay on the yellow Fever, &c.*

(Concluded from Page 36.)

SEVERAL appendices are added to the second volume, containing a variety of cases in fever, and some chronic cases; the latter with the view of shewing the effects of oxygenated muriate of potash and nitrous acid. Of these, the following seem most deserving attention:

"—— Fulton, aged 28, black complexion and hair. March 26th, 1798, About fifteen months ago was first attacked with dysentery, which changed into an intermittent, and was afterwards followed by a general yellowness of the whole skin, yellow urine, white stools, and other symptoms of jaundice. With a view to recovery, he was sent to Barbadoes, where he remained eleven months. On his return to Martinico, the dysenteric symptoms again recurred, with occasional paroxysms of intermittent fever. April 2d, There appears to be a considerable enlargement of the right lobe of the liver, a round circumscribed tumour about the scrobiculus cordis, extending under the cartilaginous extremities of the false ribs of the left side; lies easiest on the left side; has at times a distressing short cough; pulse 86; ordered a drachm of the nitrous acid in a quart of water in the day. 4th, Medicine agrees with him: complains of pain in his legs and thighs. 9th, Continued the medicine: complains of some degree of faintness and oppressed respiration. 15th, Complained of swelling and soreness of the gums; tumour at the scrobiculus

scrobiculus cordis much diminished. 25th, Complains of pain in the lower part of his throat, and angles of the jaw; gums excessively sore, with considerable salivation without fœtor. This effect of the medicine, and the morbid symptoms having disappeared, the nitrous acid was discontinued. Soon after discharged cured.

" —— Müller, admitted April 11th. A swelling of the left testicle came on twelve months before, in consequence of an injury received in that organ. About six months after, he had regular attacks of a tertian intermittent, which have continued ever since. Water is perceptible in the scrotum. 17th, The abdomen was considerably swelled, in addition to the hydrocele and intermittents. 21st, In further addition to the complaints stated, a swelling and hardness were perceived under the left false ribs. A variety of medicines having produced no change, he began, on the 21st, the oxygenated muriate of potash, in doses of four grains only, thrice in the day. 23d, Belly softer and much reduced; and his general appearance changed much for the better. Secretion of urine greatly increased, and tongue white. The latter appearance so remarkable as to astonish the orderly man in attendance. May 2d, Discharged free from complaint."

The hydrocele in this case, we presume, is understood to have been cured by the medicine. Seven cases of venereal affections are next given, cured by the nitrous acid; and some of the yaws and leprosy.

A Case of spasmodic Affection of the Face, cured by the oxygenated Muriate of Potash.

" Madame R——, a French free mulatto woman, of Fort Royal, aged 57, and of a spare habit, had been, after the disappearance of the menses, subject for eight years to the most excruciating attacks of nervous headach. Every remedy in the antispasmodic and tonic way had been in vain employed by her French physicians. At length, about two years ago, (eight after the commencement of the nervous headach,) that complaint became suddenly converted into a singular spasmodic affection of the muscles of the face, more distressing even than the headachs had been. During the paroxysms of this spasm, which returned repeatedly in the course of the day, and more especially after using the jaws in the mastication of food, or after sneezing, or other violent exertion, all the muscles of the face, but particularly those of the upper lip, of the nose, and of the cheek, were thrown instantly, and without any perception of approach, into a state of rigid con-

striction, by which the whole of the parts mentioned were drawn up towards the eyes, and produced a most horrible aspect of visage. The jaws were close shut as in tetanus, and the suddenness of their junction, often repeated, had destroyed many of the teeth. The distress of the unhappy patient was inconceivable during this state. It generally lasted from two to five minutes, when the muscles suddenly relaxing, some cessation of extreme torture was experienced. The certainty of exciting this spasm by eating or speaking, had induced the patient to avoid food as much as possible, and she generally remained silent, unless particularly addressed. This excessive abstinence, by producing an extreme meagerness of body, increased the general horrible appearance of the patient. This was her situation in the month of September 1798, when Dr. Davidson and myself first saw her. The inutility of every remedy hitherto employed, bark, steel, blisters, cold bathing, electricity, and the introduction of setons on one hand, and of antiphlogistics on the other, which had been alternately exhibited by the French physicians, left us little to choose. It was at this time we had made a variety of trials of the efficacy of the oxygenated medicines; and the general appearance of this patient, as well as the particular character of the spasmodic affection, and of the circumstances which preceded its appearance, affording room for belief that her complaint proceeded from a disoxygenation of the system, we determined on having recourse to the oxygenated muriate of potash. We made choice of it in preference to the nitrous acid, principally from its being divested of taste, and from the small compass of the dose; circumstances of importance in this case. She began this medicine on the 6th of September, in the quantity of thirty grains per day. The effect was wonderful indeed. No other remedy whatever was used, and at the expiration of three weeks continued exhibition, she was entirely free of complaint, her appetite entirely, and strength in a great measure, returned; the features of her face were restored to their natural form and character; and she came down without assistance to Dr. Davidson's house, to thank him for his attention to her. At this critical period, the whole of our oxygenated muriate of potash was expended; and, unfortunately, the weather being extremely rainy, and the situation of this woman's house low and damp, she experienced a relapse about four months after this astonishing change. Bitters, the fetid gums, æther, &c. were substituted, but no relief arose from the use of them; at length I received a con-

siderable supply of the oxygenated muriate from England. The medicine was again exhibited, and after some time produced its former wonderful effect; and fortunately, from the ability to continue the use of it, this effect has been permanent. It is remarkable, that in this, as in all other diseases in which the oxygenated muriate of potash has been exhibited, the symptoms are for some time increased in violence; but the medicine being persevered in, it at last cures. Madame R—— felt her teeth *agacées*, or set on edge, by the muriate; the gums became florid, and the tongue white; and the flow of saliva was greatly increased."

This case seems to have an affinity to that described by Dr. Haighton, in the Medical Records and Researches, called Tic doloureux, which was cured by dividing a branch of the fifth pair of nerves. *(See our First Volume, page* 8.)

Appendix No. VI. contains an Account of the epidemic Polypus at Grenada, in 1790; and the Seventh and last Appendix, "Experiments to ascertain the Degree of animal Heat within the Tropics, with Observations resulting therefrom; the Degree of morbid Heat, and the Efficacy of Cold Bathing in the Reduction of it:"—but these will not readily admit of being abridged.

From the view we have given of these volumes, the reader will see they are the result of much ingenious observation and curious research: and, although we do not agree with the author, in his idea of the cause or introduction of the malignant fever, nor entirely in the superiority of the mercurial method of cure, pushed to the extremity he recommends, we have read his volumes with much satisfaction and profit; particularly the third chapter, detailing the means of preventing the introduction or circulation of fevers that are infectious, and of preparing European constitutions to bear the tropical climate, which may be read with advantage by persons about to visit the islands, or tropical parts of the coast of Africa, or the East Indies.

In the course of the author's inquiry into the causes occasioning the yellow fever to spread so widely, he seems to have visited all the principal islands in the West Indies, and parts of the continent of South America; of each of these he has given topographical descriptions, with a particular view to the salubrity or insalubrity of the air, soil, water, &c. These are highly descriptive and pleasing, and are of themselves sufficient to stamp a considerable value on this work. Our readers, therefore, will not be displeased at our laying before them

them a specimen of the author's topography, as giving a species of information not easily to be found elsewhere.

Account of Demerary.

"Demerary, a country already highly important to Great Britain, but capable of becoming almost incalculably more so, when the settlers perceive themselves properly encouraged, and secured and protected in their possessions, merits our attention in a medical point of view. Until the chance of war threw this colony into the temporary possession of Great Britain, in the year 1781, little of this part of Guiana was known; and although the wealth it is capable of producing, to the European nation protecting it, might have been whispered by the few who have experienced its value, yet it was generally discredited. One principal cause of this ignorance was the known insalubrity of its atmosphere, on the banks of the river, and the consequent supposition that a similar unhealthy constitution prevailed on the sea-coast. Some men, on whom fortune had frowned in other colonies, and whose minds became adventurous by the operation of despair, at length broke the spell, by exhibiting the possibility of uniting prosperity and health in the flooded shores of this extraordinary country. The astonishing success of these men held out an encouragement not to be neglected, and which soon became irresistible. From the year 1787, an emigration from the British West India islands has taken place, which, whilst it threatens the desertion of these, promises to render Demerary the most wealthy and flourishing colony in the western world. The fertility of the soil, which knows no limitation, and the ease with which it is cultivated after the superfluous water has been drawn off by sufficient drains, has realized the rich prospects of the early British settlers; and will not fail the latter, if Great Britain secures the possession of the colony: and whilst their industry thus obtains the most ample return, their persons are not injured by an unhealthy climate. On the sea-coast health universally prevails. The European, ignorant of the circumstances which produce this happy exemption from disease, and having heard that the surface of the country, in a state of nature, is lower than that of the sea, and flooded with the waters furnished through the attraction of immeasurable forests, hesitates in his belief; and can alone be convinced by proofs drawn from experience.

"The features of the country of Demerary are extremely singular. The successive depositions of soil from rapid and

immense bodies of fresh water have gradually produced almost the whole of Guiana. These accumulations have been, at certain periods, limited by banks of sand, forming beaches, increasing in height as time and new accumulations have been made, and withdrawn the sea from them. In traversing the country, this is curiously ascertained, by meeting, at intervals of two or three miles, longitudinal mounds of fine sea sand, running parallel to the coast, and rising in height as they recede from it. Near the present coast they have an elevation above the common level of about two feet; at the distance of thirty miles, they may be thirty or fifty feet higher. The country, thus produced by the accretions of ages, is altogether, except the sand ridges or reefs, as they are distinguished by the inhabitants, formed of the purest and most ductile clay, to an unknown depth, but possessing the peculiar quality of changing into a fine, black, and most fertile mould, on being exposed to the action of the air and sun. No stone can be any where met with, nor rock of any kind, except in the interior and higher reefs, where the sand has become solid by the conglutination of argillaceous earth. The astonishing fertility of this soil in vain presents itself to the widely-scattered Indian nations, in whose possession the whole country, except a strip along the sea-coast and banks of the rivers, of six or ten miles in breadth, remains: and unlimited wilds of forests are known only to the rapacious tiger, the unwieldy tapier, the timid deer, the sportive monkey, &c. and to a variety of birds unknown to other regions; whilst the waters of immense rivers and innumerable smaller streams are exclusively possessed of the huge manati, the horrible alligator, the frightful camoudee, extending its enormous bulk to forty feet in many instances; and a variety of other amphibious animals and fishes.

"To prepare this soil for the purposes of useful cultivation, oblong square portions are surrounded by deep and broad trenches, which, opening into one common canal cut into the sea, carry off all the water which originally covered, or which might afterwards render the surface too moist, if permitted to accumulate. As these trenches are subject to the action of the tide, no stagnation can ever happen, unless the current of water suffers interruption by neglect. Beyond the limits of the plantations, where dams are constructed to prevent inundation, the water which covers the uncultivated surface often accumulates to the height of three or four feet; but the disengagement of pernicious miasmata is prevented by a canal

a canal common to two or four adjoining plantations, which, continually discharging the water into the sea, maintains a constant motion in it. Notwithstanding these constant drains, the superincumbent atmosphere must be at all times loaded with moisture; and, were it suffered to remain unagitated, would necessarily evolve hydrogenous gas and hydrocarbonate, and consequently render the country uninhabitable. So dreadful an effect is prevented by the constant action of the trade-wind. The coast runs nearly S. S. E. and N. N. W. consequently a N. E. E. or S. E. wind must strike it obliquely, and drive every thing noxious, or what might be rendered so by the immobility of the atmosphere, into the interior country, leaving the air on the coast divested of every impure gaseous fluid. This is illustrated by what happens when the wind at any time changes its direction, and blows from the land. In this case a most unpleasant chilliness is instantly produced and felt; but no other disagreeable consequence takes place, unless the wind shall continue at westerly points, which has seldom been observed. It is the want of this salutary agitation, and the density of the woods in the interior country, which have at all times rendered the settlements on the banks of the rivers so extremely destructive of health, and which at length have directed to the necessity of abandoning them.

"The climate of Demerary differs essentially from that of the islands. In Demerary the year is naturally divided into four portions, a short and a long wet, and a short and a long dry season. April ushers in and August closes the long wet portion; the long dry immediately follows, and continues till December; the short wet terminates towards February, and the remaining months comprise the short dry. This alternate succession of wet and dry weather favours the industry of the planter, and generally crowns it with success, without interrupting his enjoyment of health. Whilst the settlements, however, were established on the banks of the rivers, and whilst the refreshing breezes of the ocean were not felt, this alternation of great moisture and great dryness proved a source of dreadful mortality.

"Within the last twenty years, later settlers benefiting by the fatal mistake of the original colonists, have almost uniformly established their plantations on the sea-coast. The consequence has been most pleasing; for few instances of sickness, and still fewer of mortality, have been experienced. Many plantations are totally exempt from sickness for years successively:

successively: almost all the gangs of slaves, so far from diminishing, have greatly increased their numbers by the fecundity of their women, and the invariable health of their infants: negroes considered incurable, in the islands, from frequent attacks of the 'mal d'estomac,' are speedily restored to health and efficiency after their arrival in this colony: all descriptions of people exhibit the distinguishing signs of vigorous health; and the whites more especially seldom acquire, or are soon divested of, the sallow atrabilious complexion of the islands. The causes of this healthy constitution, I have already stated; but the negroes may owe a considerable portion of it to circumstances peculiar to their situation in Demerary: 1. An inexhaustible, and, in many instances, an unlimited provision, of the most wholesome and nutritive articles of diet; 2. The want of clothing—the negroes are without exception, except on holidays, perfectly naked, as far as decency will permit; consequently perspiration is not checked, nor are their bodies ever enveloped in a moist heated vapour; 3. The ease with which the cultivation of the land is carried on, and their consequent freedom from the great exertions necessarily exacted from their brethren in the islands; and, 4. The regularity and strict discipline observed in the government of the slaves."

ART. IV. *Récherches sur la Médecine; ou l'Application de la Chimie à la Médecine.* Par FRANÇOIS BLANCHET. Octavo. 246 pages. PARISSOT, New York. 1800.

IN a preliminary discourse, the author gives a short but lively history of the various systems of medicine that have been invented, and that have prevailed at different periods of time, finishing with the theories of Brown and Darwin on this subject. Having shewn the insufficiency of all the attempts that have been hitherto made to explain the phenomena of life and of diseases, he proceeds to develope his own theory, which is founded on a knowledge of the agency of oxygen and caloric, to which he attributes all the great operations and changes in nature. As all animal and vegetable bodies are found, he says, to be composed of septon or azote, of carbon, of hydrogen, of phosphorus, of sulphur, of calcareous earth, &c. with a certain portion of oxygen which is absorbed or imbibed from the air in respiration; when these principles are all in their due quantity and proportion, the body is in health; but when any inequality among them

prevails,

prevails, and one of the principles or constituent parts abounds or is deficient, disease is produced. As one, and indeed the principal, property of oxygen is, to separate or disorganize—whence, the author thinks, it might more properly be called the disorganizing principle, than by its more common name oxygen—whenever it abounds in the constitution, by uniting with and decomposing some one or other of the constituent principles, the equality among them is destroyed, and disease is produced; the same thing happens when there is a deficiency of oxygen, the hydrogen, carbon, or some other principle abounding, produce the diseases that are proper to them. Health depending on this equilibrium among the principles of which the body is composed, it will no longer be surprising, the author says, that a slight alteration in the state of the atmosphere, or in our mode of living, should induce disease. The art of curing diseases consists, therefore, in finding out the predominating principle, and in giving such remedies as are adapted to reduce it to its proper bounds. The plague and other fatal fevers, so common in tropical climates, are occasioned by the caloric existing in an undue proportion in those countries, which, combining with the atmosphere, form nitric acid—"Que le calorique, qui existe en abondance dans ces régions brûlantes, se combine et dispose les corpuscules de l'air atmosphérique à s'attirer et à se combiner chimiquement entre eux; d'où il résulte que ces vents doivent être imprégnés d'acide nitrique." This being granted, he asks, is it surprising, that these places are so often ravaged by the plague, by the putrid, pestilential, or yellow fever? Bleeding, therefore, as first suggested by Dr. Rush, and strong drastic purges, are the true and genuine means of taming these ferocious diseases: this they effect, not by occasioning a derivation of the blood or humours from the head or other noble parts, as has been ignorantly supposed, but by diminishing the quantity of oxygen, the true fomes of the disease.

"Le Dr. Rush, de Philadelphie, paraît être le premier qui ait proposé la saignée dans la cure de la fièvre jaune. Cette méthode, il faut l'avouer, a été suivie et pratiquée avec beaucoup de succès. Mais, comme l'on n'a jamais expliqué d'une manière philosophique les changemens qu'elle pouvait opérer dans notre machine, le hazard auquel elle était assujétie l'a souvent rendue pernicieuse, malgré les avantages qu'on en attendait. Pour vous mettre plus à portée de juger combien l'on peut se reposer sur cette pratique, je vais tâcher d'expliquer les principaux changemens qu'elle peut opérer dans le système.

"Mais

" Mais d'abord je vous préviens que, pour mieux nous entendre, j'éviterai ces termes vagues, ambigus et dépourvus de sens, que l'on a si souvent employés en médecine pour masquer son ignorance. Ainsi un médecin qui avait dit que la saignée produisait une révulsion dans le systême, croyait avoir dit une belle chose, tandis qu'il n'exprimait qu'une opération ou changement, dont les causes et les effets composés lui étaient absolument inconnus. Je bannis donc ce mot de mon langage."

After some arguments, ingenious but visionary, to shew the cause of the death or decomposition of the system of persons afflicted with the putrid or yellow fever, he adds, " Mais si, par une saignée, j'enlève ou diminue la masse du sang, et conséquemment la quantité d'oxygène et de calorique qui s'accumule alors dans le systême, il doit necessairement en résulter un changement favorable au malade; puisqu'on diminue la cause de la maladie, et, qui plus est, que ce moyen facilite le rétablissement d'affinité entre l'oxygène et l'hydrogène, et souvent celui de la transpiration; chose si importante dans l'économie animale."

The yellow colour of the skin, from which this fever takes its name, is occasioned, the author thinks, by the superabundant oxygen, completely oxydating the iron in the blood, aided, perhaps, by the operation of the same agent on the fat; for as lard exposed to the air becomes yellow, what can prevent the same phenomenon taking place in our bodies?

" Or nous savons que le sang contient une certaine quantité de fer, et qu'il y est à un premier degré d'oxidation, puisqu'il y produit une couleur d'un gros rouge, ou plutôt qu'il contient, dans cet état, plus de lumière que d'oxygène, proportion toujours gardée. Mais si la quantité spécifique d'oxygène vient à augmenter, quel doit en être le résultat? Le fer changera sans doute de couleur, suivant son degré de saturation, par l'oxygène, et deviendra jaune si la quantité d'oxygène est suffisante pour le porter vers le point de saturation. Ainsi nous croyons que, durant la fièvre jaune, il s'opère dans le systême un effet analogue, et que la couleur jaune qui survient ensuite au corps est due à un oxide de fer plus surchargé d'oxygène que de lumière.

" Mais, si l'on croyait que cette cause fût insuffisante pour opérer ce phénomène, il pourrait se faire aussi que la substance adipeuse changeât aussi de couleur, par l'action de l'oxygène. Car nous savons que le lard qu'on expose à l'air atmosphéric prend une couleur jaune, ou attire certains rayons

rayons de lumière: et qui empêcherait que ce phénomène eût lieu dans le système? On peut donc inférer que l'effet combiné des deux causes ci-dessus est suffisant pour donner à la peau une couleur jaune, durant cette fièvre."

On such principles as these, the author explains, with the greatest facility, the cause of the menstrual flux in women, the operation of various classes of medicines, and, in fact, all the most difficult parts of the physiology of the human frame; every where shewing the fallacy of the different modes by which they have been attempted to be expounded: but we may say with Prior,

> From this new scheme again, what knowledge flows?
> Just as much, perhaps, as shews,
> That all his predecessors' rules
> Were empty cant, all jargon of the schools,
> That he on their fallen system rears his throne;
> Finds out their great mistakes, and thence confirms his own.

ART. V. *The Chemical Pocket-book*; *or, Memoranda Chemica: arranged in a Compendium of Chemistry; with Tables of Attractions, &c. calculated as well for the occasional Reference of the professional Student, as to supply others with a general Knowledge of Chemistry.* By JAMES PARKINSON. Second Edition, with the latest Discoveries. Octavo. 250 pages. SYMONDS, London. 1801. Price 6*s*.

THE first edition of this ingenious little work was only published last year. Of this we gave an account in our Review for May 1800. The rapid sale of that impression leaves no doubt of the general estimation in which it is deservedly held, and makes it unnecessary for us to say any thing further in its praise. On taking up the volume, the reader will be at once sensible that considerable additions have been made to this impression; but of the nature or extent of these, the author gives no detail in his preface. In the former edition he had omitted to acknowledge the assistance he had received from the ingenious labours of Mr. Hatchet, whose name is now very properly added to the list of geniuses who illume this branch of science: on the other hand, the titles of some periodical works, from which he had drawn part of his materials, are now judiciously omitted, as being chiefly the productions of the writers before commemorated.

In the former edition, the diamond and some other articles

were not ranged in their proper classes, for which the author apologized. These will now be found under the orders to which they belong.

At the front of the volume is a neat engraving, representing the Economical Laboratory of Guyton; in the upper part and underneath, the chemical characters of Hassenfratz and Adet. The explanations of these are given in the first pages.

On looking over the work, it will appear that the author has revised the whole with great attention, and made considerable improvements to almost every part of it. The following additions to the characters of earths are here copied, not as the most important, but the first that occur.

"*Augustine* is an earth which, as its name imports, forms, with acids, salts which are tasteless. It was found by Tromsdorff in a mineral resembling the beryl. This earth resembles alumine, in not being acted on either by the fixed alkalies or ammoniac. It is not soluble in water; and by fire it acquires hardness, but no taste, and suffers no change in its solubility in acids. Supersaturated with phosphoric acid, it yields a salt of easy solubility; but its sulphate and acetite are very difficultly soluble.

"Guyton has obtained unequivocal proofs, not only that there exists among the earths a tendency to unite both in the dry and humid ways; but also that with regard to some of the earths, the union is such as to be capable of resisting an addition of acid in excess.

"Guyton also observes, that the action which baryt, strontia, and lime exert on oils, soaps, and animal matters, with their union with the Prussian colouring principle, sulphur, and the acids, form so many points of resemblance with the alkaline substances. But he does not seem to think they are sufficient to warrant a common classical denomination.

"Ingenhousz, Humboldt, and Van Mons observed, that the earths, being moistened, possessed the property of absorbing oxygen from the atmosphere at the ordinary temperature.

"M. Girtanner discovered, that by the application of heat this effect was considerably increased; and that with a temperature much exceeding that of the atmosphere, they would separate oxygen from water. Alumine attracts it with the greatest avidity, at a temperature much below that of boiling water. Lime requires a higher temperature, and then does not absorb so much oxygen. Silica requires a red heat, and then it seizes it rapidly.

"The

"The avidity with which oxygen is absorbed by lime accounts for the unhealthiness of rooms, the walls of which have been lately whitewashed."

We will add the following extract. The bright colour acquired by the blood, in its passage through the lungs, has been attributed to the oxygen imbibed by it in that viscus: but this is now controverted.

"Gren, in a letter to Van Mons, says, that the oxygen does not unite with the arterial blood, and that all the water in respired air is newly formed, and not separated from the blood. The oxygen is absorbed, and forms water and carbonic acid, and no part is left to unite with the blood; the change in the venous blood depending therefore on the separation of carbon and hydrogen.

"The whole of the blood, which by anatomists is divided into serum, red globules, and coagulating lymph, is found, when chemically examined, to consist of albumen, gelatin, and fibre. The serum which remains liquid after the coagulation of the blood, is composed of albumen, gelatin, some saline matter, and much water. The clot of crassamentum also affords, by repeated washing, a large portion of albumen and gelatin; after which a substance remains in appearance very analogous to animal fibre, excepting that it is in a more attenuated state. This substance (fibrin) may be regarded as that part of the blood which has undergone the most complete animalization; and from which the muscular fibre and other organs of the body are formed."

ART. VI. *The Clinical Guide; or, a Concise View of the leading Facts on the History, Nature, and Treatment of the State and Diseases of Infancy and Childhood. With an appropriate Pharmacopœia, divided into three Parts, viz. Materia Medica, Classification, and extemporaneous Prescription. Intended as a Memorandum-book for Practitioners. To which is subjoined, an Introduction to Nosology; or, a View of the most approved nosological Systems, particularly that of the late Dr. Cullen: adapted, with certain Alterations, to the present Work.* By WILLIAM NISBET, M.D. Fellow of the Royal College of Surgeons of Edinburgh, one of the Surgeons to the Royal Infirmary; now of London. Duodecimo. 407 pages. JOHNSON, London. 1800. Price 5*s*.

THE author traces the human fœtus to its primordium, to the moment when it first becomes cognizable to our senses,

or "when the first dim speck of entity begins:" it then, he says, and until the punctum saliens appears, probably enjoys little more than a vegetable existence, drawing its nourishment by little fibrils or radicles from the moisture surrounding it. The placenta being at length formed, the medium by which it is connected with, and receives its nourishment from the mother, its parts are gradually developed, and it at length assumes the form and bulk we find it possessing at the time of its birth. The author next gives the various opinions of anatomists and physiologists on the offices of the placenta, on the manner in which the circulation is carried on in the fœtus; the formation and office of the thymus gland; use of the peculiar situation of the testicles in the fœtus; of the hymen, the membrana pupillaris, &c.; all which, as little more than conjecture can be advanced, we pass over, and proceed to the more immediate subject of the volume, the account of the diseases of infancy, and the mode of treating them. He begins with describing those which affect children almost immediately after their birth. The first is the red-gum, strophulus intertinctus, but this rarely requires the use of medicines; when the meconium is retained, or not completely discharged, it occasions eructations, gripes, and these when violent may induce convulsions. We should always be careful, therefore, to clear the bowels, and for that purpose continue the use of oleum ricini, or some gentle aperitive, in children disposed to be costive, until the green or blackish colour of the stools disappear, and they become of a proper yellow colour. The jaundice, icterus infantum, is rarely dangerous; a grain or two of ipecacuanha, and afterwards a purge or two, generally prove sufficient for its cure.

We shall transcribe the author's account of the erysipelas infantilis:

"The infantine erysipelas consists of blotches, various in their appearance, and rapid in their progress, acquiring soon a purplish or leaden hue, becoming exceedingly hard, and tending frequently to mortification.

"Its attack is generally a few days after birth, seldom exceeding the month, though sometimes later; and at times its attack has been known to precede birth.

"The situations it occupies are various, as every part of the body is occasionally its seat; but its violence is always in proportion as it departs from the extremities, or affects the trunk and superior parts.

"In dissections of this disease, where fatal, a similar state

of

of the intestines is discovered; and the external inflammation, therefore, is probably merely a consequence of the internal inflammation.

"This disease is commonly very quickly fatal, and that in a few days. Various methods of treatment have been pursued; but the tonic plan, combined with an antiseptic local treatment, has been the most successful.

"The best tonic is a decoction of the bark, with aromatics, given frequently.

"To the parts, compresses, dipped in camphorated spirits, are the most successful application.

"In spite of all, however, it is a disease frequently experienced fatal."

When the teeth begin to emerge, children are frequently attacked with convulsions either arising from that cause, or from the bowels being loaded with a tough phlegm or mucus. This state of the bowels is frequently accompanied with worms. When the gums are hot and swelled, they may be lanced, to allow a freer exit to the teeth. When the convulsions are occasioned by slime or worms in the bowels, they must be dislodged by the exhibition of brisk cathartics, as of calomel and jalap or scammony. In this case the mesenteric glands soon become obstructed, the belly tumid and hard; and if the disease be not speedily cured, the child falls tabid, and dies consumptive. A cough sometimes supervenes in this case, and, if the body be opened after death, tubercles similar to the indurated glands of the mesentery are found in the lungs.

Dr. Nisbet's general remarks on the fevers of infants appear to be correct, and deserve attention:

"1st. Most of the fevers of infancy possess an inflammatory tendency, or resemble synocha; they are, therefore, acute, and of short duration.

"2d. Wherever a fever is protracted in infants, it assumes the remittent form.

"3d. The fevers of children most commonly arise from slight accidental causes, either connected with the primæ viæ or the state of the skin. In their treatment these causes are always to be had in view, and the clearing the first passages, and producing a free determination to the skin, are the chief objects to be regarded."

The following are the author's observations on the scald head or tinea, with which we shall conclude this part.

"Tinea consists in a scaly eruption of the skin of the head

or

or hairy scalp. It is attended with various degrees of acrimony, and becomes accordingly more or less infectious in its nature.

"It arises from an obstruction of the small glands at the roots of the hair, which, passing into ulceration, produce, by the acrimony of their contents, the common form of the disease.

"In directing the cure of this affection, its particular extent or progress is to be considered; and in every case it is to be held that it exists merely as a topical affection, and is to be chiefly removed by topical means.

"When the disease is incipient, simply stimulating the vessels of the part, so as to restore their circulation, will be sufficient; and for this purpose, the sulphur ointment, with a proportion of quicksilver or mustard-flour, will answer, rubbed in once or twice a-day.

"When the disease is more general, the head may be first bathed with the saponaceous or tobacco lotion twice a-day, and the scabs then anointed with the ointment of nitrated quicksilver.

"When the scurfs, besides being general, are thick and rise high, the head must be first close shaved, then washed with a solution of soap and the pitch ointment, with a proportion of hellebore powder rubbed in warm for a long time; and it is then to be covered with a wax cap. On the hairs separating they are to be removed, when a new growth will take place. The repeated application of blisters will have the same effect.

"When the eruption is somewhat of a dry chronic nature, mild alteratives may be exhibited internally, as preparations of sulphur or quicksilver, with the decoction of the woods. When the difficulty lies in the extraction of the hair, the pitch-plaster, or the application of lime, will remove it.

"In most cases of tinea, especially when extensive, an issue or seton in the nape of the neck is useful.

"Simple scurfiness of the head, independent of disease, often takes place from dirtiness; and even without this, at times, as an effect of teething.

"Combing and washing are the only means here necessary; and these may be assisted by anointing the head occasionally with cream when dry; or, if moist, mixed with arquebusade water."

After treating, in this manner, of the several diseases incident to that stage of life which is denominated childhood,

we

we are next presented with what the author calls an Infantile Pharmacopœia, divided into three parts, viz. materia medica, classification, and extemporaneous prescription, in the same manner as the volume we reviewed in our last Number; but as the drugs and preparations were all contained in that volume, they might well have been spared here.

Then follows a view of nosology, or the arrangement and classification of diseases, exhibiting the systems of different authors, viz. of Sauvages, of Vogel, of Sagar, of Dr. Macbride, of Dr. Darwin, and of Dr. Cullen,—with which the volume concludes.

ART. VII. *De penitiori Ossium Structurâ Commentarius, &c.* By A. SCARPA, Professor of Anatomy and Clinical Surgery in the University of Pavia, &c. Quarto. 55 pages, with three plates. Leipsig. 1799. Price 18*s*. Imported by ESCHER.

IN the former part of this ingenious essay, Professor Scarpa observes, that although the bones have been more accurately studied and described than any other parts of the human body, but a very superficial attention has hitherto been paid to their internal fabric. For although later anatomists have rejected the hypotheses of Gagliardi and Havers, they have adopted and published another, as it were, by common consent, which the Professor thinks equally untenable. The opinion generally entertained, that bones are composed of fibres and fibrous laminæ, formed in strata over each other, and that these fibres run longitudinally in the cylindric bones, and in the flat ones, from a centre to the circumference, he asserts to have been taken up on slight grounds, and on very imperfect examination. For although exfoliations and calcined bones put on an appearance that seems to confirm this opinion, it is still an appearance only, which a little attention will shew to be fallacious. If any one will take the trouble to examine with care even the external surface of any of the bones, he will find that the lines resembling fibres are all united to each other, by angles more or less acute, and at very short distances, so that, if a good magnifying-glass be employed, they will appear ramified, and forming a kind of net-work, as Malpighi had formerly observed. By calcining bones, the cohesion of their parts is destroyed unequally, from the action of the fire, so that this process is too rude to ascertain their real structure;

and as to exfoliations, these take place in laminæ in the soft parts as well as in the bones, so that nothing decisive is to be inferred from them. The Professor might also have added, that exfoliations do not in general put on an appearance uniformly laminated or fibrous, but very frequently discover the reticulated texture.

The fabric of the bones, Professor Scarpa asserts to be entirely reticulated, even in their hardest and most compact parts. With regard to the far greater number of the bones, when divided longitudinally, it is evident this structure obtains through the greater part of their substance; the external part only consisting of a thin, compact, and somewhat stony stratum. Even the cylindrical bones of the extremities have the same structure toward their ends; and parts which ossify late in life, such as the cartilages of the ribs and larynx, when broken across, appear likewise to be fabricated in a similar manner.

The whole difficulty, therefore, which can be supposed to exist on the subject, respects this external and compact crust which forms the superficies of the bones; and in order to ascertain whether this also has the reticulated structure, Professor Scarpa first of all repeated the experiments of Haller on the incubated egg, that he might have an opportunity of tracing the whole progress of ossification in the cylindrical bones, from its first appearance to its completion. He then took adult human bones, and by depriving them of their earth, and macerating them, their texture discovered itself more clearly. Both series of experiments are here related, and the result of them tends to establish the Professor's assertion, that the bones are entirely reticulated, even in the minute and intimate structure of their hardest and most compact parts.

His observations on the bones of the chicken are as follow:

On the 8th day, the femur and tibia were perfectly formed, but wholly of a cartilaginous and uniform texture, when examined by the best glasses.

9th day, A little yellowness begins to shew itself about the middle of the cartilaginous femur and tibia. The cartilage at that point appears a little rugous and puckered, but every where else is smooth and pellucid.

10th day, Each bone is much more yellow and rugous in the middle. These rugæ, when magnified, exhibit a most beautiful net-work; the lines meeting in acute angles, but still wholly cartilaginous, and this part only distinguishable from

from the rest by its opacity, yellowness, and a little roughness.

11th day, The rugous portion, or net-work, begins to harden, and keeps its shape when dried, the remaining part contracting and drying into a substance like gum. The part preserving its shape is osseous, and reticulated, a little thicker in the centre than toward its edges. At the inferior part of each bone a red point is visible, pointing out the situation of the lower nutrient artery.

12th day, At the middle of the tibia the ossifying net-work is bounded above and below by a red point. The superior nutrient artery begins to shew itself, and the middle of the bone, when dried, preserves its cylindrical form.

14th day, The opaque, reticulated, and osseous portion of the tibia is now lengthened toward each extremity, and is terminated at each by a zone of vessels carrying red blood. When these delicate primordia of ossification are examined by glasses of no great magnifying power, they evidently shew the nature of bone not to be fibrous, but reticulated, cellular, and cottony, formed by an accumulation of very short threads uniting at acute angles.

15th day, The whitish, reticulated, bony substance is extended much farther toward the epiphyses. The vascular zones are redder and larger. The reticulated bony fabric is visible to the naked eye. Both bones divided longitudinally shew this texture, internally as well as externally; the external paries of the osseous tube is wholly composed of bony threads or filaments, with scarce any appearance of laminæ at any part. The vessels proceeding from the vascular zone follow throughout the reticulated texture of the bone.

16th day, The whole portion that now remained cartilaginous, had a wrinkled surface, the rudiment of the reticulated bone; to complete which, nothing was wanting but the deposition of some earthy particles. The femur, when longitudinally divided, had no appearance of a lamellated fabric, but is throughout cottony, reticulated, and cellular.

The Professor put a human bone into diluted muriatic acid. The earth being dissolved, and the acid washed out, it was macerated in water, and became a woolly reticular texture. The meshes and interstices of it are larger in flat and broad bones than in the round ones, closer where the bones are compact, and looser where they are less solid. The finest structure has accordingly a great likeness to that of the skin. The cellular structure of the bones is particularly observable

in whales, dolphins, sharks, and other fishes. The following experiments seem likewise to contradict the common opinion of the laminous structure of the bones: he destroyed the shin bone of a dog, and forty days after the external rind of it was changed into a spongy substance of the thickness of six lines, which is the same case in mortification of bones, where nature surrounds the dead end of it with a thick bony sponge, only by expanding and widening the outer crust of the bone. A similar circumstance happens in the mollities ossium in children, where the bones receive the same spongy appearance as if they were laid in muriatic acid. A topical morbid mollification is sometimes observed in bones, by which they are changed into a fleshy mass, very vascular and easily bleeding, which evidently shews an analogy with common tela cellulosa, forming a similar flesh in ulcers.

The author says it is very striking how soon the bones of birds produce a spongy cotton-like texture, when deprived of the periosteum; "visu mirabile est, in avibus quanta celeritate ex ossibus de industria periostes nudatis, mollis caruncula propullulat; sanguiferis vasis plurimum referta, quæ porro in cartilaginem primum, mox intenuissimum quoddam osseum gossypium subtiliter cum extus tum intus reticulatum convertitur." The bones possess a greater quantity of vessels than is generally believed, but those that penetrate into them by the pori Haversii do not proceed in a straight direction, but form nets in the internal substance; they are likewise provided with nerves, though these cannot be anatomically demonstrated on account of their subtility and close situation to the vessels; but it is shewn, by experience, that the young flesh shooting out of wounds of the bones is possessed of great sensibility. The external plate of the flat bones of the skull appears like diploë, when its internal lamina is already quite solid. The formation of cavities in bones seems to proceed in a mechanical way, by the cortical part becoming hard.

ART. VIII. *The Philosophy of Medicine; or, Medical Extracts on the Nature of Health and Disease, including the Laws of the animal Economy, and the Doctrines of pneumatic Medicine.* By A FRIEND TO IMPROVEMENTS. Fourth Edition. Five volumes, octavo. Cox, London. 1799—1800. Price 3*l.*

OF a work which has rapidly passed through several editions, it cannot be requisite we should say much, either in commendation

commendation or explanation. Its miscellaneous nature, and the style in which it is written, evidently shew that it was intended for popular reading. The editor of these volumes, we believe, is Dr. THORNTON; who, in his dedicatory address to Sir Joseph Banks, gives the following account of his design:

"In the first volume is displayed the progress of medicine and chemistry; and the relationship we stand in to the air we breathe.

"The second volume discloses our relationship to light, heat, food, exercise, and all the variety of mental emotion.

"These two volumes include the history of direct stimuli, being an explanation of the first law of the animal economy, 'that health is maintained by a due proportion of stimuli,' with the history of those diseases arising from the superabundance of natural stimuli, and the proper method of cure.

"The third volume embraces the consideration of indirect stimuli; as, impure air, darkness, cold, hunger, rest, and the different sedative passions of the mind, which are no otherways stimuli than as they relate to the second law, 'that an accumulation of irritability ensues from a deficiency of direct 'stimuli;' and this volume embraces the diseases of asthenia, or weakness.

"The fourth volume is employed in the consideration of the third law, 'that the excessive action of stimuli exhausts 'the irritable principle in the blood;' and here the action of different poisons is fully considered, with the methodus medendi, or antidote.

"The fifth volume is a continuation of the same subject, shewing more particularly the rise and progress of pneumatic medicine.

"Thus have we attempted to set forth the Brunonian system, as improved by the latest discoveries in chemistry and medicine; and, perhaps, we shall be said to have aimed at the establishment of a new system of physiology and medicine, which hath arisen out of the old, like the phœnix from the ashes of its parent, carrying on its wings the means of preserving health, and warding off disease; a system not to be considered in itself as perfect, but only as the foundation of a better structure, which future industry may erect, and which may not moulder, like other fabrics, into the sand of which they were composed, but, as being founded upon facts, and reasonings drawn from them, may stand unimpaired, like the Newtonian philosophy, a rock amidst the waste of ages."

ART. IX. *Reports on the Diseases in London, particularly during the Years* 1796, 1797, 1798, 1799, *and* 1800. By ROBERT WILLAN, M. D. F. A. S. Duodecimo. 358 pages. PHILLIPS, London. 1801. Price 5*s*.

OF these Reports * a part was inserted in the Monthly Magazine for 1796 and 1797, and in another periodical work for 1799. They are now republished in one volume, with some additional observations, and with a continuation of the reports to the end of the year 1800; a year, as our author states, remarkable for its temperature, and for an unusual series of complaints.

Dr. W. arranges diseases under three classes, viz. acute, chronic, and periodical. In so doing, he has departed, he says, from the usual plan of nosologists, whose arrangements he conceives to be faulty, "as being formed on hypothetical principles, rather than [on] a strict analogy between the diseases put in the same order. Thus," he adds in a note, "Dr. Cullen has arranged as genera, under the order spasmi, diarrhœa, diabetes, tetanus, epilepsy, chorea, palpitatio, hooping-cough, colic, and hydrophobia." Dr. W. uses the term synochus in a different sense from that in which it is employed by Dr. Cullen. The last-mentioned nosologist expresses by it a combination of inflammatory with contagious fever; a combination which, according to the author, often occurs incidentally, but does not constitute an essential disease.

We confess this is not quite satisfactory to us. If contagion never shewed itself in synochus, except in the wards of workhouses and hospitals, where typhus cases existed at the same time, it might be granted that the contagion did not really belong to it, but was accidentally acquired; but when we see synochus manifesting contagion in private houses and in country situations, where no cases of typhus existed immediately before, nor any at the time; then we are compelled to acknowledge the actual occurrence of a fever in this climate exactly answering to the synochus of Dr. Cullen; unless, indeed, it be maintained that there are more species of typhus than nosologists have enumerated; viz. typhus bilioso-

* Two thirds of the cases contained in these Reports occurred among the lower classes of people, mostly patients in the Public Dispensary, near Temple Bar; the remaining third occurred in private practice. The Dispensary district extends from Smithfield and St. Paul's, to St. Martin's Lane, and Tottenham Court Road.

ardens,

ardens, in addition to typhus mitior, typhus gravior, &c. There is the simple bilious fever and the contagious bilious fever.

The distinction between the phlegmonous and œdematous erysipelas is just and proper; but we cannot admit that there is no affinity between this disease and the other diseases comprehended under the order of exanthemata. The œdematous or malignant erysipelas (more aptly termed by Sydenham febris erysipelatosa) is preceded and accompanied by violent pyrexia, in many respects resembling the precursory and accompanying symptoms of the small-pox and other eruptive fevers; and, like the small-pox and measles, this species of erysipelas terminates fatally, when a sudden and total retrocession of the eruption takes place. Surely these are strong resemblances between this disorder and the exanthemata above mentioned, and fully justify its arangement under one and the same nosological division.

The preface concludes with some observations on the hectica and aphthous fever, or hectica aphthosa. The former is said to arise from debility and exhaustion, occasioned by fatigue, long fasting, anxiety or loss of sleep; and is not considered merely as a secondary complaint, depending on internal suppuration, or any local effect. In the latter, the ulcerations of the tongue and fauces are accompanied by considerable febrile symptoms, diarrhœa, &c.; and, after having been healed, are liable to return, attended by the same train of symptoms as at first. In this manner the disease is protracted for several months, reducing the patient to an extreme degree of debility and emaciation.

We now proceed to give some account of diseases during each of the five years comprehended in this volume, passing over those complaints which are least worthy of notice, and bestowing our chief attention upon the reports for the year 1800; as the observations on this part of the book have not appeared before the public in any other channel.

Among the acute diseases of the year 1796, the most prevalent were the hooping-cough*, scarlatina, measles, and small-pox.

* In cases of hooping-cough, Dr. STRUVE, of Görlitz, in Upper Lusatia, (as mentioned in a late number of Hufeland's Medical Journal,) has employed the following topical application with good effect:

℞ Aq. communis ℥ij, Antimon. tartarisat. ℈j, Tinct. canthar. ℥j. M. A little of this liniment to be rubbed on the pit of the stomach every other hour.—(Every third hour would perhaps be often enough.)

pox. The malignity and fatality of the latter were remarkably great: according to the London bills of mortality, no less than three thousand five hundred and forty-eight were swept off by the small-pox during that year. What a strong argument for the Jennerian inoculation! In the course of this year (1796) there occurred a case of tetanus, produced by a slight wound, at the root of the little toe, from a rusty nail. No material inconvenience was felt for some days after the accident; but it was finally succeeded by locked-jaw, &c. The patient died at the end of a fortnight, exhausted with extreme pain and irritation, from which medicine afforded him only a slight and temporary respite.

The author's descriptive and valuable remarks on *asthenia* deserve to be laid before our readers:

"In the list of chronic diseases, it seems proper to take some notice of the article Asthenia, comprehending the disorders in general denominated nervous, which have occurred in great proportion, especially during the summer months. The state of asthenia commences with general languor, a sense of lassitude or aching in the limbs; and often with tremors. These symptoms are succeeded by shooting pains, headach, giddiness, and a strong disposition to sleep, even in the day-time. There is a sensation of faintness or depression, referred to the stomach, which calls for a frequent supply of nourishment: but, as the craving is not seconded by a proportionate activity of the digestive powers, an overcharge soon takes place, and produces heartburn, flatulency, violent pains of the stomach, or nausea, with bilious vomitings and diarrhœa. Females, in these circumstances, are distressed with a pain in the left side, sometimes alternating with a pain of the stomach.

"This complaint takes away the ability of any considerable corporeal exertions; and also renders a long attention of the mind to any subject not only difficult, but painful. The patient's temper becomes irritable, fretful, and capricious; the judgment is defective and irresolute; the imagination suggests nothing but gloomy ideas, often extending to despondency: no taste remains for accustomed amusements; but every feeling, every sensation, seems unpleasant. The night

In another number of the same Journal, we are informed, that the vapour of hot water, impregnated with various drugs, has been inhaled with considerable advantage by children labouring under this disorder.

Note by the EDITORS.

sleep

sleep is disturbed by frightful dreams and startings; and the patient awakes in the morning unrefreshed, or feeling as if much bruised and fatigued.

"Sauvages, in treating of asthenia, includes under that title, the debility consequent on fever, small-pox, scurvy, hydrocephalus, and several local complaints. He farther observes, that in asthenia there is a general weakness of all the limbs, the vital powers retaining their full vigour; or that the debility of the voluntary motions is much greater than could be supposed from examining the state of the pulse. This remark seems to have been made with the view of supporting an hypothesis; it has certainly no foundation in truth. The pulse, in every instance of asthenia, is much reduced in force: in persons of the sanguine temperament, it is weak, and usually very frequent; but in melancholic habits it is always feeble, slow, and languid. The former case constitutes the predisposition to syncope, hysteria, chorea, tetanus, and other convulsions; to mania, gastrodynia, pyrosis, diarrhœa, tabes mesenterica, fluor albus, urticaria, porrigo, and several pustular eruptions of the skin. The latter predisposes to indigestion, hemicranium, hypochondriasis, or melancholia; to epilepsy, catalepsy, ephialtes, chlorosis, constipation, chronic rheumatism, struma, internal scirrhosities, gravel, dropsy, diabetes, purpura, and to scaly diseases of the skin.

"Impure air, sedentary occupations, anxiety, and the irregular modes of living in a crowded city, are the external causes which lay the foundation of asthenia. Not only those inhabitants are affected with it who live delicately, and withhold themselves from no indulgence, but labourers, servants, and all persons confined to a dull, unvaried track of business, are sensible of its effects. In summer the complaint is much aggravated by the relaxing influence of a warm, dusty atmosphere; to which may be added, the stifling heat reflected from continuous brick walls, windows, and a burning pavement. Unhappy they who are doomed to toil in such a situation throughout the year! who seldom enjoy the sun's direct rays in the colder seasons; and during the hot months 'are never fanned by the western breeze.' In the moments of languor they court the delusive aid of spirits, by which all their complaints are rendered more inveterate; they gradually droop and pine, become hectical, consumptive, or paralytic; or, falling into the state of chronic weakness, so well described by Dr. Withers, remain through life a burden to their friends, the public, and themselves.

"Patients

"Patients in the first stage of asthenia, or whose constitutions have not been too deeply injured by a long residence in town, retrieve their health by means of cold bathing, tonic medicines, and occasional excursions into the country. There a change of pursuits, a more regular plan of diet and exercise, a more clear and purer atmosphere, the salubrious exhalations from growing vegetables, and the grateful stimulus of their odours, in a short time restore vigour to the body, and, along with it, firmness and serenity to the mind."

In the account of diseases for the year 1797, we meet with some useful observations on the occurrence of peritoneal inflammation not only in adults, but in children, and even in infants. It is often, he says, mistaken for a colic or enterodynia, arising from flatulence; whence opiates, warm purgatives, aromatics, and spirituous cordials, are usually given. The consequences of this practice are always fatal. The complaint, at an early period, is easily relieved by the application of a number of leeches round the umbilicus; by pediluvia, fomentations, and gentle purgatives. The epidemic catarrh or influenza was prevalent during the months of February and March; and afterwards, "a violent disease fell upon cats, by which many hundreds of those domestic animals perished. On dissection, the bowels were found drawn together by violent cramps, or spasmodic constrictions, involving likewise the omentum, and preventing any passage. In some of the intestines were partially red or blackish spots; but, in the greater number of instances, the contraction and extraordinary twisting of the bowels had taken place, without any marks of inflammation." The aphthous sore throat and miliaria are particularly described among the acute diseases of this year.

Purpura stands in the list of the chronic diseases in 1797. This is better known under the appellation of petechiæ sine febre. Without any considerable sensation of illness, an eruption of dark red spots appears in the skin of the legs, arms, breasts, and abdomen. These spots are precisely the same as the petechiæ in malignant fevers. On the legs, however, they are usually somewhat larger, and often become confluent in irregular patches. There is another form of the disease that may be termed purpura hæmorrhagica, which is more violent and dangerous. The spots in this species are considerably larger than the spots of the purpura simplex. The hæmorrhagy, which always attends this species of purpura, takes place from the nostrils, throat, and mouth; often from the lungs, stomach, or intestines; also from the uterus. The

disease

disease has no regular or stated termination; it has sometimes been protracted to twelve months. In none of these cases was it fatal, though other writers have found it to be so. When it continues for some length of time, anasarcous swellings and gangrenous ulcers of the extremities usually succeed. The exciting causes seem to be, poor diet, a sedentary life, anxiety of mind, &c. The remedies are, a generous diet, wine, Peruvian bark, acids, moderate exercise in the open air, and whatever may tend to produce cheerfulness and serenity of mind.

Dr. Willan very properly considers the purpura, or petechiæ sine febre, as a species of the true scurvy (land scurvy), and proves, by numerous authorities, that it was known and described many centuries ago; though, from the cases which have been published of late years, it might be thought that the disease was new or extraordinary.

The following account of the seasons at which epidemic disorders prevail, is new and interesting:

"It is observed by Sydenham, that the measles, when epidemical, usually commence in January or February, and are rapidly diffused till the vernal equinox; that the morbillous constitution is then at its acme, and afterwards gradually declines till midsummer, becoming extinct in the month of July. Having, however, paid attention to the subject for many years past, I am thence enabled to say, there is no such regularity in the commencement, progress, and decline of this disease. It has often been epidemical during the months of November and December, has nearly ceased in the spring season, and has been again extensively diffused after midsummer.

"Experience, likewise, affords sufficient reason to controvert the truth of a position made by several medical authors, that epidemical contagious diseases succeed each other in a certain order or series; some of them predominating for a season, to the exclusion of the rest. On the contrary, it is in general found, that the small-pox, measles, scarlet fever, and hooping-cough, become epidemical about the same time, and continue their progress, though not always in equal degrees or proportions. This has been uniformly the case in London, according to my own observations, for many successive years.

"The part of the year which, in this climate, most favours the propagation of contagious diseases, is the autumnal season and the beginning of winter; or the time between the end of August and the middle of December. The progress of ma-

lignant fevers, of the small-pox, and scarlatina anginosa, is checked by the first frost in December; but the measles and hooping-cough sometimes continue their course through the winter, without much abatement."

In his observations on the diseases of 1797, the author throws out some judicious animadversions and remarks on the abuse of spirituous liquors; referring for a more extended view of this subject to Dr. Anthony Fothergill's Essay on the Abuse of spirituous Liquors, to Dr. Lettsom's pamphlet on Hard-drinking, and to the first volume of the Memoirs of the Medical Society. From this part we select a few passages well worthy of notice:

"Among the lists of chronic diseases, a never-failing series of complaints, mostly produced by the intemperate use of spirituous liquors, has been comprised under the titles of dyspepsia, gastrodynia, enterodynia, and intestinal hæmorrhagy; to which may be added, several cases of asthenia, paralysis, apoplexy, gravel or dysury, scirrhous liver, jaundice, and dropsy. Fevers, internal inflammations, and many pulmonic diseases, are rendered inveterate, or even fatal, by the same kind of intemperance. On comparing my own observations with the bills of mortality, I am convinced, that considerably more than one eighth of all the deaths which take place in persons above twenty years old, happen prematurely through excess in drinking spirits. These pernicious liquors are generally supposed to have an immediate and specific effect on the liver; which viscus has been found after death, in drinkers of spirits, hardened or altered as to its texture, discoloured, and diminished. It appears, however, that the stomach and bowels suffer first from the use of spirits; and that their baneful influence is afterwards extended gradually to every part of the body, producing a variety of morbid phenomena.

"1. The usual symptoms of indigestion, attended with a disrelish of plain food, with frequent nausea, and oppressive pains at the stomach; with an inexpressible sensation of sinking, faintness, and horror; and with sudden, convulsive discharges from the stomach into the mouth of a clear, acid, or sweetish fluid.

"2. Racking pains, and violent contractions of the bowels, and of the abdominal muscles. These symptoms often return periodically, about four o'clock in the morning, being attended with extreme depression or languor, a shortness of breath, and the most dreadful apprehensions.

"3. In persons of the sanguine temperament, inflamma-

tions

tions of the peritoneal membrane, long-continued, and producing intense pain, so that the slightest pressure on the abdomen cannot be endured.

" 4. Swelling of the abdomen, emaciation of the limbs, with frequent cramps; and pains of the joints, finally settling in the soles of the feet. These symptoms are succeeded by a degree of paralysis; or, at least, an incapacity of moving the limbs with any considerable effect.

" 5. Sallowness of the complexion, with dryness and scaliness of the skin. As the powers of circulation are more and more impaired, the red vessels disappear from the white of the eye, the secretion of bile is imperfectly performed, and the small hairs of the skin fall off, leaving the surface, especially of the lower extremities, very smooth and shining.

" 6. Jaundice, ascites, dropsical swellings of the legs, with general redness or inflammation of the skin, terminating in black spots and gangrenous ulcers.

" 7. A frequent recurrence of aphthous ulcerations in the mouth, throat, &c. and an offensive smell of the breath, similar to that of rotten apples.

" 8. Hæmorrhagy. The intemperate use of spirits often occasions profuse discharges of blood from the nostrils, stomach, bowels, kidneys, or bladder; and from the lungs, in persons of a consumptive habit. Women of the sanguine temperament, who indulge to excess, often have the catamenia very profusely, long after the usual period: in some spirit-drinkers, I have known them continue beyond the sixtieth year of age.

" 9. An entire change in the state of mind: at first, low spirits, strange sensations, and groundless fears, alternate with unseasonable, and often boisterous mirth; a degree of stupidity, or confusion of ideas, succeeds. The memory, and the faculties depending on it, being impaired, there takes place an indifference towards usual occupations, and accustomed society or amusements; no interest is taken in the concerns of others; no love, no sympathy remain. Even natural affection to nearest relatives is gradually extinguished; and the moral sense seems obliterated. The wretched victims of a fatal poison fall at length into a state of fatuity, and die with the powers both of body and mind wholly exhausted. Some, after repeated fits of derangement, expire in a sudden and violent frenzy. Some are hurried out of the world by apoplexies; others perish by the slower process of jaundice, dropsy, aph-

thous ulcerations of the alimentary canal, and gangrenous ulcers of the extremities."

In the observations made in 1798, we see nothing particularly entitled to our attention, except the author's remarks on autumnal inflammation of the bowels. He says, "Inflammations of the bowels, which occur at this season, are sometimes treated slightly, being mistaken for enterodynia, colic, &c. and considered as the effect of indigestion, flatulence, or acrimonious bile. Since the consequences of this oversight may be fatal, a certain diagnostic of enteritis would be a desirable object. The violent and alarming symptoms produced by an inflammation of the ileum, or of any part of the smaller intestines, enforce attention, and have been fully detailed by practical writers. Mistakes chiefly arise respecting inflammation of the lower intestines, as of the colon about its connexions with the rectum, or cæcum. It does not, as in the other case, occasion, by excruciating pain, instant debility and depression, with vomiting, cold sweats, &c. There is at first a local but moderate pain, somewhat aggravated by pressure, and attended with thirst and general uneasiness. This pain seems afterwards to diffuse itself, producing strong contractions of the bowels and abdominal muscles, which recur from time to time, but leave considerable intervals of ease and tranquillity. The disorder, however, differs from the colic in this respect, that it is not attended with obstinate costiveness; and that after sufficient evacuations the pain is not mitigated. On the other hand, as the intestine is tender, and probably contracted about the seat of the inflammation, a most severe pain is often excited by the operation of the mildest purgative. The pulse may at the beginning be hard and contracted, but it soon becomes weak, small, and perhaps irregular. There is a fur upon the tongue, somewhat thick, and of a whitish colour. The urine has a smooth, pink sediment, which, as the disorder advances, changes its colour, and resembles a rough cretaceous powder. Vomiting is not a constant symptom in this form of enteritis.

"When improperly treated, the disease terminates by gangrene, or by extensive adhesions of the folds of the intestines, and an effusion of matter into the abdominal cavity, which often causes a large tense swelling externally, and proves in a short time fatal. In an examination after death of the bodies of two persons thus affected, when the peritoneal membrane was divided, there issued out with violence a most fetid exhalation; and, after it, were discharged between two and three

quarts of an opaque, thick matter, which had been lodged in the cavity of the abdomen. There was much inflammatory exudation on the surface of the bowels: only patches of inflammation at that time appeared on them, and on the edge of the liver. In one of the cases, the spleen seemed almost converted into a putrid mass.

"If the small intestines should be inflamed, a prompt and decisive mode of treatment is requisite; otherwise the disease terminates in gangrene and death within twenty-four hours, and sometimes in eight or ten hours. Inflammation of the lower extremities does not, as stated by systematic writers, terminate on the fourth day in suppuration or gangrene. I have known it continue, with repeated paroxysms of violent pain, for ten days; yet the patient has recovered. Should we, therefore, be called to such a case on the eighth day, it might still be proper to consider it as inflammatory; and, according to the state of the patient's constitution, to employ bleeding, particularly cupping; with blisters, fomentations, or the warm bath, and a strict antiphlogistic regimen. When opiates, warm purgatives, aromatics, and spirituous drinks, are incautiously administered at the beginning of the disorder, it becomes inveterate, and soon terminates fatally.

"I have been minute in the above observations, because some lives are lost every autumn by not discriminating inflammation from other complaints of the bowels which take place in great numbers, and under various forms, at that season of the year."

(To be concluded next month.)

ART. X. *The Medical Repository.* Conducted by SAMUEL L. MITCHILL, M.D. Professor of Chemistry in Columbia College, &c. EDWARD MILLER, M.D. and ELIHU H. SMITH, one of the Physicians of the New York Hospital. Four Volumes, octavo. T. and J. SWORDS, New York. 1797—1800.

A PART of our plan has been to announce, from time to time, such periodical works (connected with medical science) as are published on the continent. But we have hitherto been unable to give any account whatever of AMERICAN periodical publications. We are, therefore, happy an opportunity has just presented itself, which enables us to announce the completion

pletion of three volumes, and part of the fourth, of a valuable work, entitled the "MEDICAL REPOSITORY," under the sanction and superintendence of the most respectable names.

Although we have already given analyses of several recent American publications, (not periodical,) there still remains cause to lament that our intercourse with the western hemisphere is very limited. The Medical Repository is extremely well calculated to supply our defects in this department; as it contains a large number of original essays, chiefly written in America, on various subjects of practical medicine and surgery; on medical philosophy; on chemistry, and its application to the materia medica, to physiology, to public economy and the arts; on agriculture, natural history, and useful projects and inventions in America: together with reviews of the more respectable publications of that country, on the beforementioned subjects; exhibiting the substance of the works, extracts from their contents, and opinions on their objects and value; forming a full and regular exhibition of the state and progress of medical and philosophical knowledge in America.

Each volume of this work comprises four numbers, one of which is published every third month. As we have reason to expect a regular supply of the future numbers, through the kindness of a correspondent*, it will probably be in our power to exhibit frequent specimens of the most interesting original papers; as well as to present our readers with copious extracts from many new medical books, which have not yet reached England.

ART. XI. *Evidences on the Utility of Vaccine Inoculation: intended for the Information of Parents. Dedicated (by Permission) to the Right Honourable Lord Somerville.* By THOMAS CREASER, Member of the Royal College of Surgeons. Duodecimo. 36 pages. CRUTTWELL, Bath. 1801. Price 1s.

THE information contained in this elegant little tract, being published for the benefit of *extra*-professional readers, will communicate nothing either new or important to the bulk of

* We embrace the present moment of offering our most cordial thanks to the Editors of the New York Medical Repository, for the obliging notice they have repeatedly taken of our work; and beg leave to assure them, it will afford us sincere pleasure to maintain an uninterrupted correspondence and interchange of civilities.

medical

medical practitioners, who, by this time, must be acquainted with all the common arguments on the subject of cow-pox.

The author has given a condensed account, in chaste and impressive language, of the principal facts in support of vaccine inoculation: and, we think, upon the whole, his production is calculated to answer that benevolent design.

ART. XII. *Nosology; or, a Systematic Arrangement of Diseases, by Classes, Orders, Genera, and Species; with the distinguishing Characters of each; and Outlines of the Systems of Sauvages, Linnæus, Vogel, Sagar, and Macbride.* Translated from the Latin of WILLIAM CULLEN, M. D. late Professor of the Practice of Physic in the University of Edinburgh. Octavo. 238 pages. ROBINSONS, London. 1800. Price 6*s*.

THE object of this publication is not only to exhibit, in an English form, the nosological system of Dr. Cullen, but to remedy some inconveniences which resulted from the mode of printing the Latin original. An acquaintance with methodical nosology appears to us of such indispensable importance in the practice of medicine, that every measure which tends to render the study of it more general, has our hearty good wishes for its success; and that this is the tendency of the volume before us is plain, as well because the price is much less than that of the original, as because the language of the latter is now unfortunately deemed a branch of learning so unessential to a medical education, that a book written in Latin is useless to a large proportion of the lower and more numerous class of the profession. The first object of the translator, therefore, much as we lament the decline of learning which gives rise to it, has our entire approbation; the second is of less importance, but not wholly inconsiderable.

The principal inconveniences which it proposes to remedy are the want of a synoptical table of the system, and the difficulty of referring from any given genus to the order and class under which it is comprised. The former is accordingly supplied; and the latter is completely obviated by the simple method here adopted, in consequence of which the work may be consulted with much greater ease and convenience. All the references to the writings of other authors are faithfully preserved; and lists are inserted of the respective classes, orders, and genera in the systems of Sauvages, Linnæus, Vogel, Sagar, and Macbride. Tables are also subjoined, one containing,

taining, in alphabetical order, the English or common names of diseases, and referring each to its proper place in the system; others explaining the import and derivation of the terms which are employed by Dr. Cullen. Upon the whole, then, the plan appears so useful and free from objection, that we earnestly recommend its adoption, as far as may be practicable, to the publishers of any future editions of the original work.

With respect to the manner in which this translation is executed, we observe generally, that the preface and notes are rendered with sufficient fidelity; and that the style is as good as we commonly find in performances of this nature. In the most important part of the work, however, (the definitions,) we meet with errors and inaccuracies, numerous enough to prove either that the translator is not acquainted with the subject, or that he has not devoted so much attention as was requisite to the task he had undertaken. The principal of these errors we shall endeavour to point out, because we consider minute correctness as of so much importance in a work of this nature, that every deviation from it, however apparently slight, ought most carefully to be avoided.

The following extract, containing the definition of continued fevers, with the notes upon it, may serve as a specimen of the general merits (or rather *demerits)* of the translation:

"CONTINUÆ.

"Fevers without intermission, and without being produced by marsh miasmata; but with remissions and exacerbations, though not always considerable; continuing: two paroxysms in each day.

Notes.—"Sauvages calls that a continued fever which, without partial exacerbation, and without accession, continues to the end of the disease without returning oftener than once or twice in a month; and Linnæus, following most other medical schools, calls these fevers continentes. Such a fever, however, I, in a pretty extensive practice during forty years, have never with certainty seen; and I have for the most part observed in fevers, and chiefly in continued fevers, sufficiently evident exacerbations and remissions, and that daily. Vogel, indeed, seems to agree with me in this, as appears from his character of the continuæ; so likewise does the very experienced De Haen, as may be seen in his treatise De Divisione Febrium, Div. iv. Schol. 1.; and Brendelius strongly confirms my opinion in the following words: 'All our fevers, whether acute, 'inflammatory, eruptive, putrid, or otherwise, are continued re-

'mittents,

'mittents, and fill up their periods of intensions and remis-'sions.' Brendel. Opuscul. p. 11. diss. xi. sect. 5.

"Besides, although in certain fevers the exacerbations and remissions are not very remarkable, and therefore not easily observed, I am of opinion they actually take place; and for this reason chiefly, that in all fevers evidently consisting of several paroxysms, each paroxysm always performs its course, consisting of an exacerbation and remission, within the space of four and twenty hours; so that the animal economy, in this instance, would seem to be subject to some law of diurnal revolution. To this law, even in health, it submits; and in hectic fevers, with the greatest exactness. It seems, therefore, highly probable, that the same revolution which we so often observe, should likewise take place in every kind of fever; and that in nature there is no such thing as a continent fever."

"*Though I make the double paroxysm* a mark of continued fever, it may often be doubtful, whether a given fever be of the continual or remittent kind; and that this may be properly determined, I have here given a definition, different from that in former editions, as well of intermittents (to which, I think, belong all the remittents of authors) as of continual fevers. In both cases, I hope, the definitions now given will be both easily and certainly applied. But I leave it to more sagacious inquirers to determine whether these definitions are good, or the best that can be made. I suppose a continual fever to consist in the double paroxysm in each day; but as, in some cases both of intermittents and remittents, the paroxysms are likewise double, continual fevers cannot be designated by that circumstance alone. To that circumstance alone, therefore, I have not trusted; for, in every ambiguous case, I think, any remittent may be distinguished from intermittents, either by its origin, its period, or its cause. Let the experienced, however, determine whether continual fevers can with certainty be known from their manifest and very frequent origin, namely, human contagion."

In the above definition, the word *continuing* is so placed, that it either is unintelligible, or tends only to mislead; for it certainly has not, as might be supposed from the translation, any allusion to the term to be defined. The author's meaning is simply—that fevers of this description continue, or proceed through their course without intermission, but with perceptible, though not very obvious, remissions and exacerbations; whereas those of the preceding section are distinguished by the disease continuing, though with intermissions, or at least

with very decided remissions and evident exacerbations. The sense, therefore, would have been more clear if the word in question had been placed where the English construction requires it; namely, before the words "with remissions."

The beginning of the second note seems also to require some alteration. Dr. Cullen's expression is, "*Cum* continuam quamque ex paroxysmis repetitis consistere ponimus"—"*As* I assert that every continued fever consists of repeated paroxysms:"—he thus admits that a degree of ambiguity may be *caused* by this circumstance, instead of expecting, as the translator seems to understand him, that it would be in some measure *obviated* by it. This error has arisen from the insertion of the phrase "double paroxysm," which is unwarranted by, and altogether foreign to, the meaning of "paroxysmis repetitis;" as the latter expression alludes to the remissions and exacerbations generally, and not to the number of them occurring in any given space of time. We know not why, in this note, the term "continual" is so frequently applied to fever, in preference to that more commonly employed.

In the definition of hectica, "furfuraceo-lateritium" is translated simply "like brickdust," no notice being taken of the branny appearance. In that of phlegmasiæ, "dolor topicus" is expressed by "pain in a particular *external* place;" if this were correct, all the visceral inflammations would be excluded from the class. The "ambitus serpens" of erythema is rendered "waving circumference;" whereas the epithet plainly refers not to the figure of the margin, but to its tendency to creep or spread upon the neighbouring skin, as indeed the same word is rightly translated in defining herpes. In the latter, however, as well as under erythema and erysipelas, "phlyctænæ" is improperly rendered "pustules," which do not in any respect resemble vesicles. The "tumor fluctuans," which is one of the characteristics of apostema, is absurdly translated "unfixed," a term which would be much better applied to express the state of a scrofulous swelling of a gland, than to describe the fluctuation of matter in an abscess. The epithet "ardent," we conceive, applies quite as much to synocha as to any kind of fever; and is therefore very improperly substituted for the term "typhoid," in the definition of the genus cynanche. In that of cynanche maligna, the translator has effectually guarded against a repetition of the error which we have just imputed to him, by entirely omitting to notice the word "serpentibus." The "tussis clangosa" of cynanche trachealis, and "vox clangens" of one species of paraphonia,

phonia, are not adequately expressed by either "sharp" or "shrill." At the end of the note on carditis, the words "sine aliis *præter* peripneumoniæ signis," are negligently translated "without any other signs of peripneumony."

In the definitions of comata, apoplexia, paralysis, epilepsia, and hysteria, "sopor" is translated "sleep," without any remark or qualification; it would have been better, we think, to have preserved the original term, with the author's explanation of it: for as sleep is a state naturally incident to the system in perfect health, it cannot in itself be properly considered as a mark of disease. Under the article tetanus, the construction of the passage should have been, 'Of this Sauvages 'has, as usual, made many species.' In defining colica calculosa, the translation of "quondam" is improperly omitted: the author means, that the nature of the disease may be inferred from calculi having been, on some former occasion, ejected by the anus; not from their passage since the present attack, which is not likely to take place but with the termination of the disease, and would therefore be uselessly stated as a sign of its presence. To constitute cholera accidentalis, it is not sufficient, as is here said, that it should be induced by "acrid matters *in* the stomach or intestines," for these are as much the cause in the other species when it proceeds from acrimony of the bile: it is therefore necessary, as expressed in the original definition, that they should be "ingesta." In the note of p. 133, "now-a-days" approaches so near to a vulgarism that it ought to be expunged; and why is not "hisce temporibus" translated as well as "jam"? those words are by no means unimportant to the sense of this passage. In the definition of impetigines, "cutem præcipue deformantes" means something more than "producing preternatural affections of the skin." Under gonorrhœa pura, "dysuria" is improperly rendered "suppression of urine." We see no good reason for the repeated use of the word "reins" instead of "kidnies," in the definitions of the species of ischuria. That part of the character of scirrhous tumour which describes it as "ægre suppurans," is altogether omitted: if this omission be not authorized by some later edition of the original work than that now before us (1785,) we are unable to account for it. But, we must pass on to the concluding pages of this imperfect translation.

The explanatory tables at the end are not remarkably well executed. "Apocenoses" is derived from αποκινεω, to move from, instead of "αποκενοω, to evacuate." It would have been

better to refer Ectopiæ to εκτοπος, out of its place, than to "εκτοπιζω, I thrust out." "Dysenteria" is said to be compounded of δυς, εντερον, and ῥεω, with the latter of which it has certainly no connexion. Ephidrosis is here absurdly derived from εφυδρις, (as there is no such word, we suppose εφυδρος was meant,) which is translated "abundant in water;" whereas every schoolboy knows that it is composed of επι and ιδρωσις, an evacuation of sweat. Who would understand the import of hypochondriasis, from being told that it is derived from two words signifying "under a cartilage?" A similar observation may be made with respect to peritonitis, which the translator says is derived from "περιτεινω, to stretch round."

We have been more minute than may appear necessary in noticing the inaccuracies of this translation, because we think the attempt is commendable, and that it is entitled to, and will receive, such encouragement as may call for future editions. At all events, our veneration for the author of the original has compelled us to point out various errors that might have been construed into a deviation, on his part, from the strict line of accuracy and precision for which he is so justly and universally celebrated.

ART. XIII. *Observations upon the Origin of the malignant bilious or yellow Fever in Philadelphia, and upon the Means of preventing it.* By BENJAMIN RUSH. Octavo. 28 pages. Printed for THOMAS DOBSON, Philadelphia. 1800. Price 1*s*. Imported by MAWMAN, London.

THOUGH the opinion the author gave, in his Treatise on the yellow Fever in Philadelphia, published in 1794, that it took its rise from filth suffered to accumulate in the dock, and was not imported from the West Indies, as some of the physicians contended, subjected him, he says, to much contumely and reproach; and he is apprehensive he may meet with similar treatment for publishing the additional observations contained in this little book, tending to strengthen and confirm that opinion; yet his firm persuasion of the truth of his position, and of the necessity of some alterations and improvements being made in the police of that city, in order to prevent the recurrence of the disease, determine him to risk that consequence. The additional observations tend in general to shew, that malignant and pestilential fevers take their origin in camps, in large and populous cities, and in the narrowest and

most

most crowded parts of them, where there are the fewest opportunities for ventilation and cleanliness. He then points out several defects in the city of Philadelphia, recommends the inhabitants to open and clear their sewers, to empty their privies more frequently, and so construct them that the soil may not transude, and contaminate their springs, the sources of all the water they use for drinking, cooking, &c.; to wash their streets daily, to make openings, that the air may circulate through the more strait and narrow parts, and to prohibit any such places being hereafter constructed. These regulations are so salutary, that, we trust, the author will not only escape calumny, but meet with the gratitude and thanks of his fellow-citizens for promulgating them. He informs us, that a Mr. Latrobe has offered proposals for supplying the city with river water. We need not say, the author recommends that this proposal may be accepted, as it seems necessary, to enable them to carry his projected improvements into execution.

ART. XIV. *An Introduction to the Practice of Midwifery.* By THOMAS DENMAN, M. D. Licentiate in Midwifery of the College of Physicians, and honorary Member of the Royal Medical Society at Edinburgh. In Two Volumes, octavo. Second Edition. JOHNSON, London. 1801. Price 15*s*.

THE different sections of which this work is composed were published originally in separate parts; and it was several years from the first appearance of them, before they were collected and placed in the order they now assume. This gave the author time to revise his own sentiments, as well as to receive the communications of his friends, and the observations of the critics. Of these opportunities he made such use, that when the first edition appeared in 1794, it was on all hands allowed to be the most complete general system of midwifery that had appeared in any age or country; the author having judiciously collected, and combined in his work, all the improvements that had been made by preceding writers, as well as given various new and original observations which his own experience had furnished.

In publishing the present edition, the author appears to have carefully revised the work, and to have made some few alterations and improvements; but not such as to affect the practice before recommended, nor in any considerable degree to diminish the value of the former impression.

MEDICAL

MEDICAL CORRESPONDENCE.

(Communications for this department will be gratefully received.)

Art. 15. *Account of an uncommon Disease of the Eyes, which proved fatal. With the Appearances on Dissection.* Communicated to the Editors by WILLIAM BLAIR, A. M. F. M. S. Member of the Royal College of Surgeons in London, Surgeon of the Lock Hospital and Asylum, and of the Finsbury Dispensary, &c.

A YOUNG girl applied to me at the Finsbury Dispensary, labouring under a violent ophthalmia, and with both her eyes protruding in a remarkable manner. She likewise complained of extreme pain in the fore-part of her head, which allowed her no rest, either night or day. After a short time there was much fulness of the cellular substance surrounding the eyes, with a turgescence of the blood-vessels to such a degree as to excite considerable apprehension for the consequences. The local bleeding, and other antiphlogistic means which I directed, produced no abatement of these symptoms. In a few weeks the general structure of the eyes was deranged, and a sort of coagulation appeared to be commencing in the vitreous humour: the inflammation at length communicated to the brain, and deprived the unhappy patient of her senses; soon after which, death itself put an end to her sufferings.

My worthy and intelligent friend, Mr. Chevalier, accompanied me at the dissection of the morbid parts; and has preserved the eyes among his anatomical curiosities. The following letter, which I have received from him, will explain the most striking appearances.

South Audley Street,
Feb. 3, 1801.

DEAR SIR,

ON our examining, after death, the body of the patient who had died of exophthalmia, you will, I dare say, recollect our remarking, that the forehead felt at first, to the touch, as though the bone itself were enlarged; but yet, on removing the integuments, it was found in a natural state, the enlargement being only in the periosteum. This membrane, where it covered the os frontis, from a little below the coronal suture downward, was greatly thickened, and this thickening had extended into the orbits, so that the periosteum on the

upper part of each orbit was near an inch in thickness; uniform, however, in its texture, cutting very much like a scirrhous gland, but somewhat softer, and of a pale greenish colour. The disease had not affected the muscles of the eye, nor the adipose membrane connected with them, or the lachrymal gland, which were all in a natural state, except as to their position; being all thrust forward along with the eyeball, by the enlargement of the thickened periosteum. The disease extended in a slighter degree under the left zygomatic arch, so that that portion of the temporal muscle which passes under the arch lay uninjured upon the tumid membrane.

On dissecting the eyes themselves, after I brought the parts home, I found them greatly changed in their apparent structure; the humours being entirely lost, and the iris of each adhering to the cornea, with a total obliteration of both chambers of the aqueous humour. The whole globe of the left eye is consolidated into one mass, retaining only about a third of its natural size; but a longitudinal section of it shews the distinction between its several coats, which is still remaining. The right eye exhibits a very curious appearance; for though the iris adheres to the cornea, and the vitreous humour is entirely lost, the space formerly occupied by the vitreous humour remains: it was full of a watery fluid, which appeared to have been gradually effused from the choroid coat, so as to have finally compressed the retina into a solid cord, passing directly through an axis of the eyeball; commencing at the entrance of the optic nerve, and terminating apparently on the back of the capsule of the crystalline lens. All these circumstances are fortunately preserved in the preparation now in my possession.

On the anterior part of each eye, the thickened state of the conjunctiva, in consequence of the inflammation which had been produced, has almost entirely destroyed the appearance of the cornea; and on the left side the everted ciliary cartilages have adhered, so as to leave only a small fissure on the most projecting part, through which the remainder of the cornea can but just be discovered.

The dura mater appeared to be taking on the same disease as the external periosteum. It had thickened at one part into a lump about the size of a filbert, which, when cut through, exhibited exactly the same appearance as that already described, and the parietes of the superior longitudinal sinus were in the same state: but every where else it had its usual appearance; and the brain itself, and all the thoracic and abdominal

abdominal viscera, were, to the best of my recollection, wholly free from disease.

I remain, dear Sir,

To William Blair, Esq. Yours sincerely,

T. Chevalier.

Art. 16. *Further Information respecting the Progress of the Cow-pox.* By Mr. Ring, Member of the Royal College of Surgeons in London.

To the Editors of the London Medical Review and Magazine.

Gentlemen,

Letters have been received from Dr. J. H. Marshall, dated Malta, December 18th, 1800, in which he gives an account of his arriving at that place on the 1st of the same month, and commencing the practice of vaccine inoculation the next day, by inoculating several children in the Foundling Hospital, who were proceeding through the disease in the most favourable way.

Lord Keith and Sir Ralph Abercromby have issued general orders for the inoculation of the soldiers and sailors under their command. Dr. Marshall adds, "In all our experience, we have not observed a single deviation from the usual mild and gentle appearance of the cow-pox in England; nor has a single soldier or sailor been prevented from doing his ordinary duty."

It is now, therefore, evident, how little reason there was for the alarm excited with so much industry, that our brave tars were to be made the victims of experiment. Previous to receiving this intelligence from Dr. Marshall, I received from my nephew, Mr. J. Ring, an equally favourable account of the good success attending cow-pock inoculation at Chatham, which was communicated to him by the surgeon of the marine barracks.

This is the place to which all recruits are first sent, to be approved of by a general officer appointed by government; and where it is customary to inoculate those who have not had the small-pox, as soon as they arrive; which has for some time been done with the cow-pox.

The numbers wanted have been so great, that the cow-pox patients have not been entered on the sick lists; consequently they were obliged to perform the same duty as the others,

which

which they have hitherto done without perceiving any inconvenience.

I have the honour to be, with great respect,

New Street, Gentlemen,
Hanover Square, Your obedient humble servant,
March 19th, 1801. JOHN RING.

Art. 17. *Account of the anniversary Meeting of the Medical Society of London.*

THE anniversary meeting of this Society was held at their house in Bolt Court, on Monday the 9th March, at which the customary oration was read, and the officers and council for the year ensuing were elected.

The annual oration was pronounced by Mr. CHAMBERLAINE, who delivered a short history of the Society from its institution, and made suitable acknowledgments to its different founders, particularly to Dr. LETTSOM, who has been its greatest benefactor: he then recited several improvements in the medical art, brought forward by gentlemen who either are or have been members of this Society; he adverted to the act of parliament lately passed for taking an account of the population of this country, which he regarded as likely to produce considerable advantage, not only to the science of medicine, but also to that branch of the mathematics which embraces the knowledge of the decay and duration of life, derived from bills of mortality—which latter will, no doubt, in future be conducted in a more regular and certain manner than is now practised. After making several observations upon the extreme inaccuracy of these bills, which evinced the necessity of a reform, he adverted to the mischief produced by the sale of patent and other empirical medicines; and in order to shew how much more the use of those injurious compositions prevails in South than in North Britain, he observed, that the net amount of the stamp duties on those articles paid in England, in one year, was not far short of 14,000*l.* sterling, while in Scotland it produced something under 50*l.*; and these exclusive of the duty upon empirical advertisements.

The president afterwards declared the adjudications of the Fothergillian or gold medal, and also of the silver medal, annually presented by the Society; the former of which was delivered to Dr. BOUTTATZ, a Russian physician, now residing

in London, for his Essay on the medical Uses of Phosphorus; the latter was adjudged to Dr. JOSEPH ADAMS, of Madeira, a corresponding member of the Society, for his paper read before them on the Frambœsia Guinensis, which gives an interesting account of a disease but little understood in this country, although common in tropical climates.

The prize subjects for the year 1801 were then announced, (these are given in our First Volume, p. 308;) after which the Society and their friends adjourned to dinner.

The following is a List of the Officers and Committees elected at this Meeting to form the present Council.

President,—Dr. James Sims.
Treasurer,—Dr. Walker.
Librarian,—Mr. J. Hurlock.
Secretaries,—Mr. Field, and Mr. J. H. Hooper.
Secretary for foreign Correspondence,
Dr. Robert Hooper.

COMMITTEES.

1. *Theory and Practice of Physic.*

Sir J. M. Hayes, Bart. M. D.
Dr. Lettsom.
Dr. Hulme.
Dr. Saunders.
Dr. Bradley.

2. *Anatomy and Physiology.*

Dr. Relph.
Dr. Fryer.
Mr. Abernethy.
Mr. Coleman.
Mr. Macartney.

3. *Surgery.*

Mr. Ford.
Mr. Norris.
Mr. Ware.
Mr. Forster.
Mr. Blair.

4. *Midwifery.*

Dr. John Sims.
Dr. Haighton.
Dr. Petch.
Mr. Webb.
Mr. Ring.

5. *Materia Medica and Pharmacy.*

Dr. Yelloly.
Mr. Jackson.
Mr. Kilpatrick.
Mr. Jeaffreson.
Mr. Mackinder.

6. *Botany and Natural History.*

Dr. Bancroft.
Dr. Thornton.
Mr. Chamberlaine.
Mr. Whately.
Mr. Strong.

7. *Natural*

7. *Natural Philosophy and Chemistry.*

Dr. Babington. Mr. Parkinson.
Dr. Elliott. Mr. Seaton.
Dr. Garnett.

Register,—Mr. Wheeler.
Orator,—Dr. Lowdell.

Art. 18. *Observations on the Treatment of Burns.* By Mr. Harrup, of Chobham, Surry.

To the Editors of the London Medical Review and Magazine.

Gentlemen,

Having for some time past made several comparative trials of the efficacy of different applications to burns, the following is what has succeeded beyond all expectation:—it is nothing more than a solution of cerussa acetata in water. The proportion I have found succeed the best, is a drachm of the salt to a pint of water. In some cases, where there was a considerable tendency to a discharge from the surface, I have used it stronger. The solution is seldom complete, the liquid being turbid, and depositing a sediment when left at rest; but this is no disadvantage.

This remedy not only affords relief in a much shorter time, but also prevents swelling, and perfects a cure sooner than any application I ever knew tried.

As its use has been attended with uniform success, I shall only give the two following cases:

—— Gale, about fifteen months old, some time last July, slipped down by the side of a pot of boiling water, into which his left arm was unfortunately plunged. I saw him soon after the accident. The whole of the fore-arm and hand were in one continued blister, which I opened in several places, with a pair of scissars, in order to discharge the contained fluid. Several folds of old linen were then soaked in the above-mentioned lotion, and applied to the parts. The child instantly shewed less symptoms of pain, and in about a quarter of an hour seemed quite easy, and went to sleep soon after. The linen was kept constantly wet with the lotion; and on the second day the whole of the cuticle came off. He continued free from pain, and in twenty days the cure was completed by this mode of treatment alone. Seven pints in all of the lotion were used. It is almost unnecessary to observe,

that each of the fingers was done round with rags to prevent adhesion. The dressings were removed once in two days, only to avoid giving pain, and prevent the free access of the air: when they required wetting, the arm was immersed in the lotion.

We may remark, by the way, that this case affords a strong proof of the inoffensive nature of the cerussa acetata, when applied to parts stripped of the cuticle. If any deleterious effects had really taken place by absorption, they must have been manifest from the liberal and long-continued use of it in so young a subject.

Soon after this accident, J. Otaway had her face, neck, and right wrist burnt by the explosion of about two ounces of gunpowder, which was in a plate in her lap. When I visited her, an hour after the accident, she complained of much pain and a burning heat of the parts. Her face, in several places, was scorched and black; the other parts and the neck were of a dark copper colour; a number of vesicles surrounded the wrist, which were opened, and the contents evacuated.

The lotion was applied as in the former case, and the rags kept constantly wet with it; in less than two hours she was free from pain. The same treatment was continued, and in about three weeks the cure was completed. The discoloured cuticle, during the cure, came off by degrees, and no scars or discolouration whatever remained.

For the first four days, I have always employed the lotion cold; if after that time the patient complained on that account, it was brought to nearly the heat of the body before applying it.

I am, Gentlemen,
Your obedient humble servant,
ROBERT HARRUP.

Chobham,
March 6th, 1801.

Art. 19. *Observations on Dr.* REICH's *Theory of Fever.* Addressed to the Editors by an anonymous Correspondent.

GENTLEMEN,

THE following loose observations suggested themselves on a perusal of Dr. Reich's Theory of Fever, lately communicated to you by Dr. Domeier. If you think them worthy a place in your Magazine, their insertion will much oblige

Your humble servant,
MEDICUS.

The basis of Dr. Reich's theory consists in considering the human body as a chemical laboratory, governed by chemical laws, performing its functions by, and owing its organization to chemical agents. This is the idea Dr. Domeier has given us. A thousand phenomena of daily experience in the animal economy rise up to contradict these premises; let one suffice to shew, that the chemical attractions of dead matter have no influence upon living matter. Every thing which has life exists under circumstances the most favourable to putrefaction; yet as long as life is united to matter, scarce does an approach to putrefaction take place. This fact alone is sufficient to prove, that the common laws of chemistry exert but a confined and very partial influence over the human body.

But I find by the Medical and Physical Journal, that Dr. Reich acknowledges, that "the animal chemical processes differ from the dead chemical or physical, by having their place of action in the animated body, where the common laws of chemical affinity are differently modified." From this we must conclude, that the Doctor believes these chemical laws to be governed by the vital principle; or that he supposes a distinct agent of modification, which he cannot define, and which is altogether ideal; consequently that he cannot argue on such laws as he would on the acknowledged principles of chemistry: but they being a new and distinct set of laws, till understood, any induction from them is purely supposititious; and that, as there is a principle paramount to, and directing the chemical processes of the body, this is no doubt often directly acted on by the medicines we exhibit; and therefore any universal chemical explanation of the modus operandi of medicines must, for the most part, be false.

If this mode of reasoning be just, the theory falls from its foundation: but to meet it on its own ground, I think it is equally incompatible with the acknowledged principles of chemistry. We know, that on the chemical combination of any two substances we have a tertium quid resulting, which differs in its properties from those of either of its constituents, and having different effects on the human body: *e. g.* Very deleterious effects would be produced by giving that quantity of corrosive muriate of mercury, which, separated into its constituents, crude mercury and muriatic acid, would produce little or no effect. This undeviating law is altogether violated by the theory, which lays it down as a principle, that we can add oxygen to the system through the medium of substances containing it; and that medicines act according to the proportion

of

of oxygen that they contain, without any reference to the change of its properties when compounded. Were this a fact, it would follow that we should give oxyd of arsenic, since its constituents give us no room to suppose it has deleterious qualities.

The reason the Professor assigns for the necessary decomposition of an acid is futile in the extreme; he alledges, that each union of an acid with any other body is a process of combustion, and no combustion can be performed without the union of oxygen with the burned matter. This is contrary to fact: latent heat may be realized by the mixture of two bodies, but there is no proof of a union of oxygen in many cases; heat becomes sensible on the mixture of alkohol and water, but we have for the result no new compound, nor has any decomposition taken place.

The most singular assertion broached in this theory is, that muriatic acid must be decomposed in the body, as neither it nor sea-salt go from us as substances; when it is well known to every chemist, that a large portion of the salts of the urine is muriate of soda, and that it probably forms a similar proportion of those of the sweat. Thus, I think, the only shadow of reasoning appears to be false; little else remains but pure hypothesis. The opinion, that "azote is the stimulating or exciting positive principle of life, and oxygen the tempering, mitigant, limiting, and negative," is so utterly incompatible with all the known properties of oxygen, that it must rest on no better proof of its probability than the ipse dixit of Professor Reich.

Take it under any point of view, the hypothesis is perfectly unsupported by just reasoning or established facts, and it tallies as badly with practical experience. The most powerful remedy in cutting short the course of continued fever, is a combination of a vegetable acid, potash, and the oxyd of antimony (antimon. tartarisatum;) yet the Doctor has declared vegetable acids to be of little power. A practical fact, altogether inexplicable on this theory, is, that a remedy shall be efficacious at one stage of the disease and not at another; that tartarized antimony, which will remove a fever in the first week, will do little good in the second or third; and bark given in the paroxysm of an intermittent will increase the disease, but in the remission will prevent its recurrence: according to the principles of the theory, oxygen ought to be supplied equally well at all times. As far, indeed, as can be gathered from the information before us, it is of little consequence how we give these

these wonder-working acids; thus we are to suppose they will prevent the recurrence of an intermittent, if given in the paroxysm as well as in the remission.

We find also every disease which has been called febrile curable by the same means, and deducing its phenomena from the same cause, whether symptomatic or idiopathic; though every tyro in medicine must be aware how false that idea is, as they differ in essence; the former depending on local causes, existing but through them, disappearing with them, and having nothing like the regular course of fever, properly so called. Surely, primâ facie, it is absurd to deduce any two diseases from the same cause, which can be shewn to differ so essentially. Not to have done this, however, would have destroyed the systematic symmetry of the theory, which reduces the proximate cause of almost every acute disease to one standard. Happy simplicity! which resolves the bulk of pathological knowledge into the deficiency of oxygen, and gives the medical student scarce another fact to learn in practice.

With respect to the practical facts which have led to this theory, nothing can be said, as no explicit one is brought forward. To judge with any precision of these, we must have the cases in minute detail before us, be acquainted with the circumstances under which the remedies were exhibited, and what other means of cure had been employed. Acids united to an antiphlogistic regimen may, as refrigerants, very probably so ameliorate the symptoms of fever, that it shall run a mild course; but we are not told whether they ever have cut short the disease, and whether, on their exhibition, the phenomena of a crisis have ever appeared. General statements will never give us sufficient data by which we may appreciate the merit of remedies. The ephemeral reputation of a variety of medicines, at every æra, has amply established the truth, that medical facts are as fallacious as medical theories; and the empirical assumption, that these remedies will be efficacious in diseases so opposite in their phenomena, and probably in their nature, makes much against them.

The concluding detail of supposed advantages which are to result from this discovery, puts us much more in mind of the vapouring boasts of a Paracelsus, than of the cool judgment of an accurate or scientific physician.

Art. 20. *Extract of a Letter from Dr.* De Carro *to Dr.* Jenner, *dated Vienna, 14th February* 1801; *giving an Account of the Progress of vaccine Inoculation in Germany and Italy.*

In the neighbourhood of Vienna I had lately an interesting proof of the philanthropy of a clergyman, and of the good which that class of men can do when they choose to do it. I had inoculated four children of a gentleman living in the village Brün am Gebirg. The respectable curate of that parish made daily observations on the inoculation of these children, and was astonished at the slightness of the disease. He was particularly struck with the perfect likeness of the pustules to your beautiful copper-plates. He wished to inform himself upon the subject of the vaccine inoculation, and was soon convinced so fully of the importance of the discovery, that the next Sunday he gave from the pulpit an history of the cow-pox inoculation and its immense advantages; and concluded by a very paternal and sensible exhortation to his parishioners to avail themselves of the benefit of it. He adopted this measure, that he might ascertain the confidence they had in his directions, and their affection for their children.

His harangue had such an happy effect, that the next Tuesday, the day fixed for my visit to the village, I found thirty-eight children waiting for inoculation; and in three subsequent visits I have inoculated more than eighty persons. The distance of that place from Vienna not allowing me to go there so often as I wished, the physician of the place, Dr. Iberer, continues the vaccine inoculation, which has so much charmed all those country people, that they come now without further exhortations, either of the curate or of the physician. If that example, to which I have given as much publicity as I could, should be followed by the brethren of the worthy curate of Brün, how many thousand lives, so precious to the country after a destructive war, would be preserved!

A young nobleman, Count Francoù Hugues de Salm, distinguishes himself particularly by the encouragement which he gives to the vaccine inoculation at Brün, the capital of Moravia. He came on purpose to Vienna to be made acquainted, by me, of the best steps he could take to introduce it: he examined some vaccine patients, to know what the vaccine pustule ought to be: he has read all the treatises he could collect on the subject: he has addressed an exhortation to the people of Moravia, to profit by your valuable discovery: he has offered two prizes for the two Moravian physicians who shall

shall inoculate the greatest number of children in the course of the year: he has engaged two intelligent physicians to assist in these inoculations in an apartment of Prince Salm, his father's house, devoted to that purpose: and, what is most curious, he has written a very good history of the vaccine discovery, which he has distributed among all the curates and schoolmasters of Bohemia and Moravia. These associations are under my direction; they send me their registers, have their vaccine matter from me, &c. Such patriotism is truly praise-worthy, and reflects the greatest honour upon the young nobleman who has conceived and established such an humane institution.

I have introduced the vaccine inoculation in the Venetian state, under the direction of a very intelligent physician, Dr. Moreschi, who has begun it with the greatest success. I look upon Dr. M. to be perfectly well versed in the new mode of inoculation, which I am far from considering as a simple thing. As the Doctor has begun his inoculations at Venice with children of people of the first rank, there is no doubt that their example will be followed very rapidly, and that Italy will soon enjoy the benefit of the practice.

The Geneva physicians are so perfectly convinced of the advantages of this inoculation, that they have printed a short and popular exhortation to the people, which has been put into the hands of all clergymen, who are ordered to deliver a copy of it to the father and godfather of every child that is brought to church to be christened.

But among the various progresses of the cow-pox inoculation to which I have been instrumental on the continent, none seem to me more interesting than its introduction at Constantinople, under the auspices of Lord Elgin, the English ambassador; who discharges, by this means, in some respect, the debt which England, and all Europe, had contracted with the Turks for the inoculation of the small-pox. His Lordship had heard such favourable accounts of the cow-pox, that he introduced it at Constantinople, by the inoculation of his own child, Lord Bruce.

Art. 21. *Extract of a Letter on the Jennerian Disease, from* Dr. J. H. Marshall *to* Mr. Ring, *dated La Valette, January* 21, 1801.

Since my last letter to you from this place, I have succeeded in the inoculation beyond my utmost expectation. The

inhabitants have generally come into it; and the governor, Captain Ball, has established an hospital for it, under the name of the Jennerian Insitution, for the inoculation of the poor. It gives me no little pleasure, that I have been instrumental in affixing the name of the discoverer to this disease; a name which will be remembered with gratitude to the latest posterity. The example of this little island, which has so promptly stepped forward, and been the first to set the example out of England, in establishing the present institution for the most benevolent of all purposes, will, I hope, soon be followed by other countries; and we shall speedily hear of the Jennerian disease having totally eradicated the small-pox.

The progress of the Jennerian disease here, after inoculation, is marked with no variation from its usual appearance in England; nor is it the least aggravated. I enclose you a small paper, which I wrote at the request of the governor, and which was distributed through the different towns and villages. The last part of Dr. Jenner's treatise is now in the press; and as soon as I have an opportunity, I shall send you a copy. A curious case has occurred here, in which I inoculated a patient with the Jennerian disease, after she had been infected with the small-pox naturally; but which, at the time, was unknown to me. The particulars I have related to my friend Dr. Jenner, who will shew them to you.

The diseases most prevalent in this island are, intermittents, and what are called bilious complaints. In general, the inhabitants are healthy, and live to an old age. The climate, at this season of the year, is variable, and very similar to April in England. The rapid progress of vegetation is astonishing: we have now the finest cauliflowers, brocoli, pease, &c. that I ever saw; in short, vegetables of all kinds in the greatest abundance, and of the finest qualities. Cotton is the principal culture of the island; though they are now, at the instigation of the governor, beginning to plant vines.

Art. 22. *Cases and Observations, illustrating the medicinal Effects of Digitalis.* By Dr. Douglas.

To the Editors of the London Medical Review and Magazine.

Gentlemen,

THE influence of digitalis in hæmorrhage, inflammation, and consumption, has lately occupied the attention of the medical

dical world; if you think the following cases and observations upon its efficacy likely to be useful, they are very much at your service.

I am, Gentlemen,

N° 20 *Baker Street, North,* Your most obedient servant,
March 4, 1801. J. Douglas.

THE admirable influence of digitalis, in hydropical affections, attracted the attention of many physicians of the first eminence twenty years ago. Since that period it has been in very general use, commended by many, and condemned by many. It was, however, uniformly remarked, both by its supporters and opponents, that it excited a most powerful effect upon the animal economy, chiefly by diminishing the frequency of the pulse. From this property, some medical practitioners were anxious to make trial of its efficacy in suppressing active hæmorrhage. Among these, Dr. Ferriar has particularly distinguished himself; yet I cannot help thinking that his observations are calculated to excite hopes which will be often disappointed. He overrates the utility of the medicine, when he says that the pulse may be reduced from 120 to 75 or 80 "at the will of the practitioner." In some habits, though the medicine is administered with the utmost caution, the pulse sinks by starts, and not regularly, in proportion as the digitalis is increased. In others, violent vertigo, sickness, or griping take place before the pulse has indicated the necessity of caution. But, besides, the following cases will prove that digitalis not only does not always cure, but that it is not always a prophylactic. In one instance it was undoubtedly the exciting cause of hæmorrhage.

Sarah Edmead, aged 33, of a phthisical habit, had received considerable benefit last summer from digitalis, when she laboured under consumptive symptoms. She was seized, towards the end of November, with violent hæmoptöe. After being bled to ℥viij, twenty drops of the tinctura digitalis were ordered to be given every four hours: on the following day the pulse had sunk from 128 to 98, and was considerably fuller; the dose was increased to twenty-five drops, as the hæmoptöe continued, and next day the pulse was 88. She had severe recurrence of the hæmoptöe; thirty drops were now given, and on the following day thirty-five, when they caused sickness—pulse 66—occasional retching and purging: the hæmorrhage was suspended; but as soon as the sickness went off (it continued two days) the pulse rose and the hæmorrhage returned.

returned. Cerussa acetata was now had recourse to, combined with opium and gentle aperients, which completely checked the bleeding. Phthisical symptoms afterwards occurred, which have been suspended by the digitalis and Griffith's mixture.

James Dodd, aged 40, had been long afflicted with phthisis mucosa: he was of a florid complexion, and his pulse 98. He began with ten drops of the saturated tincture of digitalis three times a-day; fifteen, twenty, and twenty-five, were given on successive days at each dose: upon increasing the number of drops to thirty, he became violently sick. When the nausea had gone off, he again began with ten drops, which were afterwards increased to twenty-five; his pulse was then 70, and full. While going on with the medicine, he was attacked with hæmoptöe, the mucus he expectorated being deeply tinged with blood.

Elizabeth Howell, aged 44, had ascites and general anasarca. The digitalis was given first in small doses, and afterwards increased to forty-five drops three times a-day: this induced sickness. Small doses of opium were then prescribed in a carminative mixture; but by her mistake the drops were continued. Every symptom was aggravated; and, on the third day of her sickness, she both vomited and purged considerable quantities of blood. This woman, contrary to expectation, recovered. Dr. Ferriar mentions a case exactly similar, which terminated fatally. While such accidents occur, it cannot be denied, that we are yet far from the prospect of "acquiring the government of the springs of salutary and morbid motion."

'I have no desire to cavil about a word, nor to dispute whether digitalis be a direct sedative or not; but of this I am assured, from extensive experience, that though digitalis diminishes the frequency of arterial action, it rather increases its force. Where it is of use in hæmorrhage, it may be thus explained: The quicker the action of the heart is, the greater will be the arterial congestion, of course the greater hazard of rupture of vessels; and when hæmorrhage has occurred, the same cause will be more likely to continue it: diminish the frequency of the pulse, the congestion is diminished, and a longer period intervening between each pulsation affords a better chance for the formation of a coagulum to seal up the ruptured vessels.

'In inflammation, I have made but one trial of the digitalis.—George Waters had severe pneumonia; he was copiously bled,

bled, and digitalis administered, with other medicines. The fourth day of its exhibition, he took three drachms of the saturated mixture by measure; and as it had then produced no effect whatever, the medicine was omitted. This man recovered by the usual plan of treatment in such cases.

There is a medical gentleman in London, who says "he has not bled a patient for some years in inflammatory complaints;" he goes one step farther than Dr. Ferriar, who allows "that bleeding may still be necessary in the first instance." I have a high respect for the acquirements, the talents, and character of Dr. Ferriar, but he certainly inculcates a dangerous error, when he gives such unqualified credit to the foxglove. He says, it is true that the practice is extremely critical, and the patient's pulse must be examined from hour to hour; yet the prudent practitioner dares not at first venture beyond small doses, lest the remedy become more destructive than the disease. To many constitutions the medicine thus given will be perfectly futile; if larger doses are ventured upon, they often excite violent sickness, with little warning; and the efforts of the constitution to throw off the poison may be attended with fatal consequences. In all inflammatory complaints of the intestinal canal, digitalis must be a most hazardous remedy. Boerhaave has observed, that it is apt to ulcerate the mouth, fauces, œsophagus, and stomach. I think I have once or twice seen a tendency to this effect.

I have exhibited digitalis in many cases of incipient consumption, and always with advantage. Where the disease, however, has become more confirmed, my practice has been less fortunate. It is particularly useful in the chlorotic phthisis, combined with myrrh and steel.

Ann Brown, aged 16; of a pale complexion, with little appetite, and general listlessness; has never been regular; considerable cough; pulse 98. Griffith's mixture was ordered, which she continued six weeks without advantage, and was evidently losing ground: fifteen drops of tinctura digitalis were then ordered, with ℥jß of the mixture, three times a-day; the pulse fell to 74, and was stronger; the drops were gradually increased to twenty-five; her cough disappeared, her appetite improved; her pulse 62, full and regular. She continued the medicine ten days afterwards, and in about a month from the time she began the digitalis, she was freed from every complaint.

Nelly Douglas, aged 14, after typhus, had severe cough,

with emaciation, great pain under the sternum, and the appearance of purulent expectoration; occasional diarrhœa; pulse 116. Five drops of tinctura digitalis were ordered three times a-day, and gradually increased to twenty, when the pulse fell to 56. All the symptoms were rapidly removed, and her appetite, health, and strength were soon re-established. She had been ill two months before the digitalis was given.

Jane Watson, aged 17, had been five months ill; great emaciation; pulse 120; cough severe, with much purulent expectoration. She took the digitalis, beginning with ten drops, and increased them to sixty-five, three times a-day, as she imagined, with advantage; but the disease continued to increase, and she fell a victim to it. The pulse had been reduced to 54, without sickness.

Mary Hoon, aged 15. Pale complexion; pulse 114; severe cough, with purulent expectoration; had been ailing for some months. She took at first ten drops, and at last ninety, three times a-day, in an oily emulsion, with the addition of a small quantity of opium; her pulse came down to 58; all her bad symptoms disappeared, and Griffith's mixture completed the cure.

It were needless to multiply cases. The digitalis, whatever may be its mode of action, is a grand discovery in the treatment of pulmonary complaints; though no practitioner can be sanguine of success in confirmed consumption, who has frequently witnessed the destruction of parts consequent upon this disease. We are, however, highly indebted to those able and scientific practitioners, who, reasoning upon the known qualities of the digitalis, departed from the usual routine of unfortunate practice to try a medicine which afforded some prospect of curing a disease that has been always considered one of the opprobria medicinæ; and we may be allowed to exhibit it with some hopes of success, though we may not be quite so sanguine as to suppose "that it will as certainly cure phthisis as bark an intermittent fever."

Art. 23. *Report of the Diseases prevailing in London from the 20th of December* 1800, *to the 20th March* 1801. Communicated to the Editors by Dr. MURRAY, Physician to the Public Dispensary.

FEBRES intermittentes	4	Febres continuæ	80
Quotidiana cephalalgica	3	Hectica —	3

Ophthalmia

Ophthalmia	— 4	Palpitatio	— 2
Cynanche inflammatoria	2	Asthma	— 1
——— maligna	2	Dyspnœa	— 8
——— parotidæa	1	Pertussis	— 12
Pneumonia	— 19	Pyrosis	— 3
Peripneumonia notha	6	Colica	— 4
Enteritis	— 3	Colica pictonum	— 3
Rheumatismus acutus	13	Diarrhœa	— 18
——— chronicus	18	Diabetes	— 1
Lumbago	— 8	Hysteria	— 2
Ischias	— 2	Amentia	— 1
Otalgia	— 2	Tabes	— 6
Podagra	— 2	Hydrops universalis	4
Erysipelas	— 4	Anasarca	— 5
Variola	— 8	Ascites	— 1
Scarlatina	— 8	Hydrothorax	— 9
Varicella	— 3	Icterus	— 3
Aphtha	— 2	Dysuria	— 2
Epistaxis	— 1	Amenorrhœa	— 22
Hæmoptysis	— 7	Dysmenorrhœa	— 1
Phthisis	— 31	Psora	— 19
Hæmorrhois	— 4	Morbi cutis chronici	13
Menorrhagia	— 2	Asthenia	— 21
Abortus	— 1	Cephalalgia	— 12
Leucorrhœa	— 11	Pleurodyne	— 9
Hæmatemesis	— 2	Prolapsus uteri	— 2
Hæmorrhagia intestinalis	1	Lithiasis	— 2
Catarrhus	— 65	Dysphagia	— 1
Dysenteria	— 8	Febris infantilis	— 20
Hydrocephalus internus	3	Dentitio	— 2
Paralysis	— 2	Verminatio	— 11
Dyspepsia	— 37		
Tetanus	— 1	Total number of cases	596
Chorea	— 1		
Epilepsia	— 2		

The weather and the diseases of the last three months afford little occasion for general remark. As the former has been, for the most part, extremely mild, the latter have not so far assumed their usual decided winter character, that any one disease or set of symptoms can be said to be especially epidemic. Continued fevers have hardly been more frequent than in any of the preceding months; and catarrhal affections, though prevalent to some extent, and in some instances of considerable

considerable violence, have scarcely amounted to more than one fourth of the number which occurred during the same time and under the same circumstances, in the last winter.

In the case of cynanche parotidæa, the metastasis from the maxillary glands to one of the testes, and from that to the other, took place, with the other symptoms of the disease, as described by Dr. Hamilton, in the first volume of the Transactions of the Royal Society of Edinburgh. The fever was considerable, and the affected testicle was hard, swelled, and very painful. Immediate relief of all the uneasy sensations was produced by the operation of a gentle emetic, and the repetition of this appeared to have the most beneficial effects in promoting the cure.

One of the cases of enteritis was remarkable for the rapidity with which it hastened to a fatal termination. The patient, after having complained for a few hours of weakness and lassitude, was seized with a shivering, and the disorder of the bowels, and died within twenty-three hours from that attack.

All the instances of scarlatina here mentioned, occurred in two families; in one it was confined to the children, and had very mild symptoms, the fever subsiding immediately on the appearance of the eruption, and the subsequent indisposition being so slight as to require little medical assistance, except for the catarrhal affections by which it was accompanied. In the other family, the disease extended also to the adults, and appeared in them with symptoms of extraordinary severity: though the throat was slightly affected, the fever continued for several days with unabated violence; pains in the head, back, and limbs were constant and excruciating, more resembling, as the patients described them, those of acute rheumatism than what commonly occur in fevers. The bowels were obstinately costive, with uneasiness in the epigastric region, and nausea, increased by pressure to pain, and vomiting of thin, greenish matter. The eruption was not permanent, but was chiefly vivid, on the back of the arms, and on the bosom; its appearance, recession, and return seemed to be attended by little change in the state of the other symptoms, except in one instance, where, after it had disappeared, opium and æther in small doses were given at intervals, on account of the restlessness and exhausted state of the patient; and on the following day the eruption was again manifest, and all the symptoms much relieved. Upon the whole, however, emetics, vitriolic acid, bark, and the other medicines usually employed,

ployed, seemed of little service in hastening the favourable termination of the disease: but when the fever was evidently declining, the latter remedy, conjoined with contrayerva, was of perceptible advantage. The return to health and strength was, in all the patients, extremely slow; the appetite continuing weak, and the same state of the bowels remaining as during the disease.—I subjoin an

Abstract of the Bills of Mortality, from December 9th, 1800, *to March 10th,* 1801.

1.	Abortive, stillborn; *headmouldshot* —	104
2.	Aged; bedridden — —	441
3.	Apoplexy; *lethargy; palpitation of the heart*; suddenly	60
4.	Bleeding, *piles;* spitting of blood —	5
5.	Cancer — — —	13
6.	Childbed, miscarriage; *tumor in the womb*	44
7.	*Colic, twisting of the guts;* rupture —	8
8.	Consumption, asthma; *cough;* pleurisy —	1454
9.	Convulsions, stoppage in the stomach; gripes; croup; teeth; *rash;* thrush; *rickets*; worms	1146
10.	Dropsy, swelling; *tympany* — —	218
11.	*Dropsy in the brain,* water in the head —	15
12.	Evil; sores, ulcers; fistula — —	7
13.	Fever, *brain fever, malignant fever; headach; ague*	725
14.	Flux, *looseness*; *vomiting* — —	4
15.	Gravel, stone; strangury — —	2
16.	Hooping-cough — — —	51
17.	Jaundice; *liver-grown* — —	25
18.	Inflammation; abscess; mortification —	217
19.	Lunatic — — —	31
20.	Measles — — —	26
21.	Palsy — — — —	20
22.	*Quinsy; sore throat; scarlet fever* —	—
23.	Rheumatism; gout — —	20
24.	Scurvy; *itch;* French pox — —	7
25.	Small-pox; chicken-pox; *cow-pox*; *swine-pox*	526
26.	Spasm, *cramp*; *locked-jaw*; *St. Vitus's dance*	1
27.	*Surfeit; rising of the lights*; grief; cold; *diabetes*	4
	Diseases	5174
	Casualties	64
		5238

Under two years of age	1395
Between two and five	560
five and ten	216
ten and twenty	164
twenty and thirty	429
thirty and forty	521
forty and fifty	595
fifty and sixty	470
sixty and seventy	425
seventy and eighty	313
Upwards of eighty	150
	5238

I have endeavoured, in the above abstract, to reduce to as few heads as possible the numerous articles of which the bills of mortality are composed. In doing this, I have regarded, in the first place, the real affinity between any two diseases; secondly, the degree of accuracy with which it is probable that they are commonly distinguished from each other by those, on whose reports the bills are framed: and, lastly, the frequency of some particular diseases, and the necessity of separate distinction resulting from that circumstance. Thus, for example, apoplexy and lethargy are in their nature nearly allied, but there can be no doubt that many cases of the former are referred, in the bills, to the article of sudden death; and it is probable, that this term likewise comprises all cases of death from organic affections of the heart or large vessels, except a few referred, without any particular reason, to "palpitation of the heart." I hope, therefore, that the propriety of arranging together these four articles will be sufficiently apparent; and that this instance may serve as a general illustration of the rules observed in forming the abstract.

Whether phthisis pulmonalis be in so many instances fatal as the numbers here asserted to die of "consumption" give reason to suppose, is a question which has been repeatedly discussed, and need not here be revived. Whatever may be the fatality of this disease, I am certain, that many cases, having nothing in common with pulmonary consumption, except wasting of the body, are included under this title in the bills: and, on the other hand, it is probable, that some cases of genuine phthisis are constantly referred to the articles cough and asthma. The last-mentioned disease is so extremely rare, that the number of fatal cases of it, which are said to have taken

place

place in three months, probably exceeds the whole number that has occurred in the metropolis during the last ten years. The error with respect to pleurisy is of an opposite nature; as there is reason to think that many more die of this than are recorded in the bills; these are referred partly to cough and partly to fever; but it seems preferable here to rank pleurisy with the other pulmonary diseases than with the latter.

The diseases arranged under the ninth head are for the most part those which affect children under five years of age. "Convulsions," indeed, are not wholly confined to them, because these are reported in many cases as the fatal disease, even where they occur merely as the immediate forerunners of death. The difference between the amount of these diseases, and the number of children who have died below the above-mentioned age, may be chiefly made up from consumption and fever, (to one of which is referred almost every case of tabes mesenterica,) and from small-pox.

It may be questioned, whether "headach" be with propriety included in the same division with the fevers. I have thus placed it, because it is so often a prominent symptom of them, that it may sometimes be taken to give name to the disease; because I know of no other disease with which it could, with greater propriety, be conjoined; and because it is in so few instances idiopathic, and in so small a proportion of those has a fatal tendency, that it does not seem right to constitute of it a separate article. Part of the latter observation applies to "ague;" a name which would probably have no place in the bills of mortality, if the shivering fit of a fatal continued fever were not sometimes mistaken for the paroxysm of an intermittent.

An apology is perhaps necessary for associating scarlet fever with the other diseases of the twenty-second article. The term quinsy, as used in the bills, imports, I believe, an inflammatory sore-throat, with very considerable enlargement of the tonsils: but the appellation "sore-throat" is applied indiscriminately, whether the disease be of an inflammatory nature; or of the malignant, putrid kind, which is sometimes accompanied by the scarlet efflorescence.

The general term "scurvy" comprehends almost all chronic cutaneous affections, except those which are known to be of the nature of psora or syphilis. As it is probable, however, that the distinction is often not very accurate, they are here referred to one head.

The five articles contained in the last division have nothing

in common, except that they are so unimportant as to frequency, or their titles are of so uncertain application, as to render a separate distinction of them unnecessary.

As there are many diseases mentioned in the bills of which no cases are reported in the three months comprised in this abstract, these are distinguished by *Italics*.

Many valuable remarks and much curious information relative to the bills of mortality may be found in the fourth volume of the London "Medical Observations and Inquiries;" and subjoined to Dr. Black's "Observations on the Small-pox."

March 23d, 1801. T. A. MURRAY.

Art. 24. *Critical and practical Remarks on the Use of Digitalis in pulmonary Consumption, and on the Theory of Catarrh, &c.* By Dr. MOSSMAN, of Bradford, Yorkshire.

To the Editors of the London Medical Review and Magazine.

GENTLEMEN,

AT an early period of the history of man, a simplicity of regimen probably excited very few morbid actions. The presence of disease, however, would necessarily suggest the art of healing; but the application of supposed medicinal agents would be merely an experiment. The efficiency of any power in affording relief would very certainly lead to additional trials, till an accumulation of evidence secured the reputation of the instrument employed. To necessity then, and to accident, we owe the origin of our art. At a more advanced period of society, a more luxurious regimen would add to the number and complication of diseases; and to obviate the multiplying evils, new powers would be called into exertion. In the progressive application of the art to the removal of morbid phenomena, it would necessarily happen that the means employed would, in point of reputation, be subject to numerous revolutions; some would acquire a high character, which had formerly been disused; and others, which had once been of much celebrity, would be banished from the class of curative agents. Were specifications necessary to establish the truth of this remark, they might be amply supplied from the history of the materia medica. The powers of the cinchona are now put beyond suspicion; but a retrospective view of its history exhibits a fate singularly checquered. It has been recommended, and interdicted even by legislative authority; and I am of opinion that

that this variety of reputation is to be ascribed solely to the abuse of the remedy; for it is now consistent with general experience, that the cinchona, when judiciously administered, is very certainly preventive of the paroxysm of an intermittent. If this be true, Which is best entitled to our applause—the man who accidentally discovered the cinchona? or the man who first taught us to command its beneficial influence? In the hands of inexperience, much mischief may be occasioned by the indiscriminate employment of a powerful agent; and hence it is probable that the cinchona (though capable of being directed to purposes the most valuable) may have been productive of very serious effects. It is probable, too, that many errors were committed by those who first introduced the digitalis. I make little account of what is called "the pride of invention," for if mankind be benefited, I care not from what hand the benefits flow; and I shall even feel equally disposed to applaud a man, whether he revives an old remedy, or introduces a new one, upon the supposition, that in both instances he brings something valuable to the treasury of medicine.

The remarks of your correspondent, BOOKWORM, suggested the preceding and subsequent observations. Mr. Bookworm has not named the physician to whom his allusions are intended to apply, respecting the pretended discovery of the foxglove; but he has so pointed him out, as to place the matter beyond all doubt. I know of no man, however, who has "ushered into the world, with the imposing air of a discovery," the history of the digitalis. That the plant and some of its leading features were known many years ago, is sufficiently certain; but it must be admitted, that its extensive application to the government of the heart is a recent discovery. The passage from Salmon quoted by Mr. Bookworm recommends, in very strong language, the general use of the plant in cases of pulmonary consumption; but there is such a want of precision in his directions, that it is impossible to conjecture in what doses it was then administered; for although there is much apparent accuracy respecting the frequency of its exhibition, and the quantity used, still we are completely in the dark respecting the strength of the preparation which was employed. This is a striking inattention. It is also very singular, that a man who administered the digitalis so extensively as Salmon certainly did, should never observe its power over the action of the heart; and if he did observe it, it is still more singular that he did not detail this phenomenon.

From

From the vague and loose terms in which the digitalis was directed to be exhibited at that period, I am well persuaded, that in some cases it would not display its curative influence, and in others that it would produce symptoms of extreme violence;—it ceases then to be matter of astonishment, that it should soon be doomed to disuse. It is presumable, I think, that the digitalis was administered either ineffectually, or that its operation was mischievous; for we hear no more of it till its diuretic powers were strongly marked by the experience of the late Dr. Withering. The inquiries, however, of that able and amiable physician did not establish the beneficial agency of the plant in pulmonary consumption. I cannot explain this circumstance; but the fact is beyond suspicion. The discovery of the beneficial powers of the plant in diseases of the thorax is very certainly the fruit of recent observation. It is true, that the recommendation of Salmon did not secure a permanent reputation to the foxglove, as a healing agent in pulmonary affections: it is also true, that the experience of Withering did not go to establish its efficacy in these diseases; and yet it is consistent with the knowledge of us all, that it now assumes a very high rank in the alleviation and removal of those morbid phenomena. Whence has it acquired its present celebrity? During the last century, the fame of the plant underwent some revolutions; nor could Salmon so explain or direct its administration as to prevent its falling into disuse. It at one time obtained a place in the pharmacopœias, and again was banished from them. It was principally administered in dropsies; and very generally in enormous doses. In an infirmary of much note, I can remember it being prescribed in the Herculean dose of a scruple per day. Dr. Withering foresaw and foretold the result of this practice: his predictions were verified in the general abandonment of the use of the plant, even in dropsies. In consumptions it was seldom administered; nor are there on record any vouchers of its successful application. Such was the character of the digitalis: what rank does it hold now? Its curative influence is now so well understood, not only in the primary stages of pulmonary disease, but in most cases of increased vascular action, that it bids fair to become one of the most universally applicable instruments of our art. The quality of the different preparations of the digitalis is now well known; and the proper doses of the plant are very exactly ascertained: inquiries are also instituted to call forth the aid of auxiliaries.

By what means has the attention of the faculty been so

generally excited to the recent employment of the foxglove? Who has reared it to that celebrity which it now so deservedly maintains? The parent of its fame is a man whose brilliancy of talents is unrivalled, whose benevolence knows no limits. In his pursuits after truth, the digitalis commanded his notice. Till this auspicious period, its application was almost exclusively confined to dropsies: and even in those diseases, it was not by any means generally or judiciously employed. I ought, perhaps, to apologize for the following discussion; for I conceive that a knowledge of the author of any discovery is of little importance. The utility of the invention is alone valuable. It is a matter of the most perfect indifference to the languishing sufferer, whether he be indebted to this man or the other for the means of alleviating his pain.

But to proceed: it is surely a very singular assertion of Mr. Bookworm's, "that if men were to read more they would discover less;" for I imagine, there are only two principal sources of discovery; that reading is one of them, and observation the other. The latter is the most satisfactory. Were we to derive the sum of our knowledge from books, to the exclusion of observation and experiment; were we to assume the tenets of antiquity as facts established, and sit down contented at an espousal of ancient creeds; our information would be always imperfect, frequently erroneous, and very certainly stationary. A repetition of the experiments of others frequently leads to the detection of error. The result of ancient experience may be permitted to operate as an auxiliary in our inquiries; but it surely ought not to assume any other ground. A knowledge of the truth is decisive of a large portion of the fate of man; and, instead of implicitly crediting the observations of others, we should even be afraid to trust our own. I can never have any veneration for that man, who heedlessly receives opinions because of their ancient or exalted origin. I admire the attempt to push experiments beyond the range of our present imperfect knowledge; for though the experimenter may not always obtain the object of his researches, yet he may accidentally stumble on a discovery of much value; and although he may not always succeed in attaining to a knowledge of the truth, yet I conceive that much is achieved by the detection of error. The sum of ancient knowledge very certainly does not furnish us with the means of curing diseases; and whatever may have been the attainments of our fathers, it must, I think, be admitted, that they have handed to us one art at least in a state of striking imperfection. If there be a physician of unbounded

bounded benevolence, who is daily employing his fortune and the powers of a brilliant understanding in efforts to ameliorate the condition of his species,—I adore that man.

In the paper before me, your correspondent has also adverted to the doctrine of catching cold, or catarrh; and he has favoured us with a passage from the Prolegomena of Sauvages, to prove that this author understood the true nature of the disease under consideration. The words are as follow: "Utcumque cum morbum a perspirationis repressione oriri sæpius putem, non minus notum est omnibus, cum non solum ab aëris subito refrigerio, vento frigido suscepto, sed etiam a subita post frigus aëris incalescentia ortum ducere, ut et ab insolatione, &c." Now I think it sufficiently obvious, from the first blush of this quotation, that Sauvages' ideas of catarrh were extremely vague and confused.

Men of the best information are, I imagine, very generally persuaded, that the existence of catarrh is not to be ascribed to obstructed perspiration; for it has long since been ascertained, by actual experiment, that during the existence of catarrh, the perspiration is as abundant as at any other period. The labours of Sanctorius and Keil have put this fact beyond all doubt. It is not logical, then, to trace any morbid action to a cause, the nonentity of which has been clearly demonstrated.

The various and repugnant causes which Sauvages assigns for the production of catarrh, are strong evidences that he had no luminous views of its real nature; and it is presumable, that a practice founded upon opinions so contradictory must have been equally absurd, as the popular error respecting the hot regimen in small-pox, and the sedative quality of opium. It is very certainly true, that a rational history of catarrh has long since ceased to be a novelty, nor do I know that any living author has attempted to exhibit it in that light. The doctrine was the happy fruit of the just reasoning of departed genius. The unfriended and the unfortunate Brown was its parent: his great and expanded mind was the first to propose a theory positively satisfactory to every correct thinker.—"Catarrhum (says he) igitur e frigore esse calore solvendum, gravissimus error est. Contrà, frigus nunquam nocet, nisi ubi ejus actionem calor excipit," &c. This is the doctrine of Brown; and it has been commented on, as a specimen of just thinking, by the elegant pen of Beddoes. The system is sufficiently simple, and will no doubt be durable.

Your correspondent, exulting in his detections (as he terms them,)

them,) concludes his paper with a quotation from Terence, and another from the Son of Sirach. It is sufficiently certain that, in one sense, there are no new powers under the sun; but it is equally true, that the modification and application of those powers to beneficial purposes, are constantly in a state of progressive improvement. It would enormously swell the bulk of this paper, were I to exhibit specifications:—thousands must occur to every observer.

Bradford, I am, Gentlemen, yours obediently,
Feb. 27, 1801. GEORGE MOSSMAN.

Art. 25. *A List of Cases which have occurred at the Finsbury Dispensary, from February 20th to March 20th*, 1801; *with practical Observations*. By Dr. REID.

	Number of Cases.
CHLOROSIS and amenorrhœa —	25
Menorrhagia — —	8
Diarrhœa — — —	17
Cough and dyspnœa — —	45
Phthisis pulmonalis — —	3
Cynanche tonsillarum — —	5
Erysipelas — — —	16
Continued fever — —	27
Chronic eruptions — —	21
Infantile diseases — —	32
Anasarca — — —	9
Cephalæa — — —	2
Epilepsy — — —	6
Hysteria — — —	3
Asthenia — — —	48
Hypochondriasis and dyspepsia —	39
	306

The district in which the patients of the Finsbury Dispensary are visited comprehends the parishes of St. James, and of St. John, Clerkenwell; of St. Luke; of St. Sepulchre, within and without; of St. Bartholomew the Great and the Less; the liberties of the Rolls, and of Glasshouse Yard; the town of Islington; the parishes of St. Pancras; St. Andrew, Holborn; and St. George the Martyr, Queen Square.

This tract of ground may properly enough be termed a northern district of the metropolis.

The cases of amenorrhœa constitute a considerable proportion in the above list. In a disease which is characterized by general debility, and seldom attended by local inflamma-

tion, it is much to be wondered at, and to be lamented, that physicians should have such frequent recourse to the remedy of blood-letting; which cannot fail, by weakening still farther, to aggravate all the morbid symptoms it was intended to alleviate. By no means is it uncommon for repeated venesections, in such cases, to occasion an effusion upon the lungs, which soon terminates the sufferings, by terminating the existence of the patient. That relaxation of body, that irritability and dejection of spirits, and those various pains and uncomfortable feelings with which the young chlorotic female complains of being afflicted, are not to be relieved by bleeding, or any kind of lowering evacuants; but rather by the assiduous application of those mental and physical stimuli, the direct tendency of which is to induce a state of universal vigour and excitement. Out of the great number of patients afflicted with this complaint that have come under the care of the reporter during the last fifteen months of his practice at the Dispensary, he recollects scarcely a single instance in which steel, in some shape or other, did not, in a longer or shorter time, accomplish the object which he had in view.

To some it may seem remarkable, that so many cases of amenorrhœa should have fallen within the sphere of dispensary-practice, as this is a disease that is, comparatively, seldom observed amongst the lower classes of society; it is, therefore, necessary to state, that although a considerable number of our patients are from amongst almost the poorest of the community, there is still a large proportion of them who, living as domestics in opulent families, share in the luxuries of their superiors, and, of course, in common with them, experience all the bad effects of good living. Besides, it is not singular for governors of the charity, who are in a decent and even rather an affluent condition, to convert the privilege which their annual subscription affords them, to the relief of their own wives and children, as well as of other friends who stand on the same level of life with themselves. A circumstance which, although in various respects highly conducive to the advantage of a young practitioner, cannot but appear glaringly inconsistent with the nature and object of a charitable institution.

Cases of fevers have considerably decreased in number during the last month, whilst catarrhal and asthmatic affections have been much more extensive in their prevalence, as well as troublesome in their symptoms. In these complaints, especially when they attack the aged, little is to be done, either by the apothecary's art or by the skill of the physician: an

accurate attention to clothing and diet is almost all that can with advantage be recommended, unless, indeed, a change of air, which, however, among the lower classes is seldom practicable. The writer of this article has more than once seen a person at an advanced period of life afflicted with these catarrhal and asthmatic affections, suddenly deprived, by the merciless hand of an empirical practitioner, of almost all the few drops of blood that still lingered in his withered and nearly exhausted veins. The distended and overcharged vessels of the vigorous and the young may admit, and sometimes even require, a partial evacuation of their contents: but, to take from an emaciated old man, bent under the weight of years, any part of that vital fluid with which he is so scantily provided, is an act that would never be rashly committed by any discerning or intelligent practitioner. Fewer murders, perhaps, have been perpetrated by the sword than by the lancet. Next to the vast scythe of time, scarcely is there any weapon that has committed more cruel ravages than those which have been effected by this powerful, although minute instrument of destruction.

The instances of hypochondriasis, recorded in our list of diseases, have in general occurred at an advanced period of life. There are few persons, indeed, at an advanced period of life, in whom we may not detect, in a greater or less degree, the symptoms of this disease. Objects in general having lost in a good measure their power of interesting, being no longer entertained by the amusements, nor engaged earnestly in the serious occupations of life, and most of those social connexions being broken which tended formerly to divert his attention from himself, it is no wonder that the mind of an old man should often become occupied almost entirely by the daily increasing infirmities of his body. This will be still more likely to occur in those cases where a person has been so unfortunate as, in the earlier periods of his life, to expend in licentious and enfeebling pleasures the whole of that corporeal vigour, part of which ought carefully to have been reserved for the comfort and support of age. A remark which might be illustrated by the instance of a celebrated personage in sacred history, who, after having exhausted the powers of his consitution by that unlimited debauchery to which his youth and manhood were devoted, at length complains, in the true temper of an hypochondriac, that—"All is vanity and vexation of spirit."

Red Lion Square. J. Reid.

Art. 26. *Extract of a Letter from* M. WESTLING, *Physician at Norkoping, in Sweden, respecting the different Kinds of Cinchona, and its comparative Virtues.*

AT the vacant hours which the practice of physic allows me, the author says, I have laboured much in my inquiries into the different species of cinchona. Your method of vegetable analysis, and the reforms in chemistry, which have so great an influence in the art of curing, have greatly assisted me in my labour. The species of cinchona, with which we are made acquainted by the works of botanists, and of which M. Lambert has lately given us eleven figures, are not sufficiently distinguished by their characters. There reigns much confusion in the synonyms. A happy circumstance having afforded me an opportunity to collect several species of this bark, very carefully distinguished, since they were addressed to me by my friends, Professors Swartz and Thunberg; I have learned, at least, to know them again by the comparative action of the reactives.

1. The yellow, cinchona flava, (called by others royal or Brazil cinchona,) I have used with confidence and constant success for eight years. It forms the subject of a dissertation which will be inserted in the acts of the Academy at Stockholm.

2. The true red cinchona is very near to the former by its virtues. It is wanting in the pharmacopœias.

3. The common red cinchona, which is almost inert. This is a bark of near five centimeters thick. These three species are unknown to the botanists. I look on the tecamez as synonymous to the common red.

4. The cinchona floribunda, named falsely Caribæa. I think this is the species that comes from St. Domingo, which you have analysed. It is the bitterest of all. A sick person cannot bear more than fourteen decigrammes. The Caribs sell it under the name of Carib quinquina; and under that name it has been badly described, and still worse analysed, by Kentish.

5. The cinchona angustifolia of Swartz.

6. The cinchona Caribæa of Linnæus, which Swartz himself has gathered in America; and which is very different from the others. This species has two starry points, as brilliant as if they were metallic, scarcely visible to the naked eye; and which I have not been able to dissolve in any reactive. Its taste is both bitter and sweet.

7. The

7. The cinchona corimbifera of Forster.

8. The officinal cinchona, which, by the frauds of the dealers, is varied to infinity, and which often make it useless.

On these eight species I have made such comparative experiments as have been in my power, without a laboratory, without instruments, and at the leisure moments of my profession. These experiments induce me to believe, that the antiperiodic and febrifuge virtue of the cinchona consists chiefly in its tanning power *(in vi coriaria.)* To determine this, I followed the mode of precipitation by isinglass, appeared to me the surest.

The yellow cinchona exceeded all the others in this property. The oxygen increases, like the vapour of phosphorus and electricity; if my experiments do not deceive me. It is a certain remedy in quartan fevers, which are very obstinate in northern countries. The species the nearest approaching to this resembles it still more by its tanning qualities. I do not doubt but its tonic properties are the same as the last; for the lax fibres are constantly affected with spasms: for this reason it is, that tonics change the febrile state of the body.

The cinchona floribunda is almost entirely deprived of this tanning quality; therefore it only cures the quartan fever. These experiments have long given me an idea of trying to determine this property in several indigenous plants. The experiments I have made seem to persuade me that we shall not always find the American cinchona necessary. We were informed some time since, by a German journal, that they had discovered in the flowers of the speckled or burning nettle, the febrifuge quality. This experiment in every respect deserves attention.

You thought that an addition of oxygen, favoured by caloric, would convert the attractive matter of the cinchona into a species of indissoluble resin. I think this has been demonstrated. My chemical and clinical experiments have proved, that heat does not weaken the febrifuge virtue of the cinchona, as it injures its tanning property. If the bark is of a good quality, an infusion for some minutes in boiling water is sufficient to extract these properties. I have found that the resin always weakens the tanning power. Alcohol, united with water, still more easily dissolves this febrifuge principle; the precipitation or separation of the resin is of little importance. The inquiries which are expected from you will serve to determine the nature of the tanning matters, and also to determine the connexion

which

which exists between this principle and the febrile matter; or more exactly the febrile state of our bodies.

I do not think, that we should attribute this virtue to the gallic acid, so frequent in vegetables. It would be useful to try what this acid, united with bitters, is capable of producing in intermittent fevers. It seems necessary that this gallic principle should be united to some other to give it that property. I am led to think that this union takes place with some inflammable matter. It is this combination which causes it to produce the black colour, and gives it its astringent qualities. In a word, the astringent power appears to me to be different from the tanning property.

I have been interrupted above a year in the experiments I had begun on the dying quality of lichens. I propose to renew them in the spring, and to conclude them. I am chiefly desirous of determining the influence of hydrogen gas on the colouring matter.

Art. 27. *Refutation of the galvanic Experiments of M. Von Humboldt.* By M. Pfaff, of Kiel.

M. PFAFF, of Kiel, has published a memoir on M. Humboldt's experiments, which has caused much attention. Pfaff, having repeated M. Humboldt's experiments, has found the result entirely different. He proves that the chemical actions of the different bodies on the fibres, as supposed by M. Humboldt, do not exist; and that all bodies only act as forming part of an electric chain. He shews also that the different hyphtheses of M. Humboldt contradict each other, and that after having read his work, we are but little more advanced in the physiology of organized bodies than we were before. He thinks we ought rather to confess our ignorance of the unknown process of vitality, than content ourselves with an hypothesis so completely imaginary as M. Humboldt's. He conceives that such an application of chemistry to the physiology of the human body, impedes rather than advances our progress in science. We go to rest, he observes, in an agreeable dream; we think we know, and we cease to inquire. Who would ever believe, says he, that two or three drops of alkali, or oxygenated muriatic acid, were capable of producing a chemical change in a great number of muscles that are convulsed after the application of these substances? M. Von Humboldt, according to his own account, at first supposed that the fixed alkali

alkali acted by the azote and oxygen it contained; since he supposed that two oxydallic bases, azote and hydrogen, advance the chemical process of vitality, while two other similar bases in the carbonic hydrogen gas, hydrogen and carbon, retard this progress. Von Humboldt assures us, that two substances, as different as fixed alkali and oxygenated muriatic acid, act in the same manner, notwithstanding the chemical affinities of the two substances are so opposite. No, no, adds the author, it is not by chemical affinities that we can explain life. M. Pfaff proves, by very ingenious experiments, that water, if not the only, is the principal agent. "In fact, I have found, that, by making use of a bit of sponge saturated with water, I can produce the same effect as M. Von Humboldt's experiments; and I am persuaded that galvanism is only animal electricity, known long since, recovered by Galvani, Humboldt, and others,—to be forgotten again."

Art. 28. *A Case of Tetanus cured by the Cold Bath.* In a Letter to Dr. R. H. Archer, of Baltimore, by Dr. William Harris, of Pennsylvania. (From the New York Med. Repos. Vol. iv.)

Sir,

In the autumn of 1799, I visited a labourer, about 30 years of age, of a slender make, but healthy, who was suddenly seized, whilst in bed, with spasms in his lower extremities, which shortly after affected his whole system, but particularly his stomach, which was drawn in a hard lump, and protruded to a considerable distance. His pains were excruciating. He had a violent vomiting and purging, which came on an hour after seizure, and continued about two hours. At one time he had emprosthotonos, at another opisthotonos, to the greatest degree, and sometimes complete tetanus. The muscles of his face were drawn in every direction, and deglutition entirely impeded. His pulse varied much, but was generally feeble. He could assign no cause for the attack. I bled him, put him in the warm bath, and used all the remedies laid down by medical writers, but without any mitigation of his pains, or relief to his spasms.

At this time, which was twenty hours after the attack, when the cold sweat of death appeared to be upon him, his tongue had refused its office, his eyes sunk, having a glassy appearance, and his exit was every moment expected, it occurred to me that the cold bath might have a good effect; and, after consulting

consulting his friends, who readily acquiesced, I had him, in this state, carried in a blanket to a forge dam which was at hand, and plunged in. He was then insensible. His spasms immediately abated, and in twenty minutes totally ceased. The debility induced by muscular exertion was such that it required several days before he could be removed; after which he rapidly recovered, and is at this time perfectly well.

This was a complete tetanus; and, I think, tetanus from wounds, &c. would yield to the same mode of treatment.

Belle-Font, June 12, 1800.

Art. 29. *Announcement of intended medical Publications.*

1. DR. JENNER is about to publish a Third Edition of his Treatises upon the Cow-pox; with the addition of another treatise on that subject, which will contain a plate, exhibiting the vaccine pustule in progressive stages, from its commencement in the form of a red pimple to its termination in a perfect scab.—This plate, for the conveniency of those who possess Dr. Jenner's three first publications, will be given also separately with the additional Fourth.

2. Dr. MOSSMAN is preparing for the press a Dissertation on febrile Action; including Strictures on the general Treatment of Fever, and an exhibition of powers radically and specifically subversive of those morbid Phenomena.

3. Mr. JOHN PULLEY, Surgeon, of Bedford, intends soon to publish an Essay on the proximate Cause of animal Impregnation, being the substance of a paper read and discussed in the Medical Society at Guy's Hospital, in October 1799.

4. We are informed that Mr. MACARTNEY is about to publish a translation of Professor MURRAY's excellent Description of the Arteries, ed. Upsal, 1798.

5. Dr. FERGUSON, of Aberdeen, has in the press an Essay on Fever, which will be published in a few months.

6. Mr. NICHOLSON is engaged in translating Fourcroy's extensive System of Chemistry, comprised in ten volumes, octavo.

7. AUGUSTINE's Tabular History of Medicine, lately published at Berlin, is also translating into English.

8. Mr. HENRY is about to publish a Chemical Companion for Students, &c.

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ANALYSIS OF BOOKS.

ART. I. *Oratio in Theatro Collegii Regalis Medicorum Londinensis, ex Harveii Instituto, habita Die Octob.* 18, *An.* 1800, ab HENRICO VAUGHAN, M. D. Medico Regio extraordinario. Quarto. 18 pages. WHITE, London. 1800. Price 2*s*.

IF the Harveian orations annually pronounced before the President and Fellows of the Royal College of Physicians cannot boast of unfolding to the medical world new discoveries or great improvements in the Æsculapian art, they at least have the merit of perpetuating the remembrance of the most distinguished physicians which this country has produced, from the foundation of the College to the present time; and of perpetuating such remembrance in a language which ought to be familiar to every man of education and science. Thus a double utility results from this institution: the names of a Harvey and a Sydenham are not suffered to be forgotten amid the crowd of modern pretenders; and an occasion is given for composing in the native tongue of Cicero and Celsus.

When a subject, in itself not very interesting, has been for nearly one hundred and fifty years the theme of an annual oration, it requires no ordinary talents to treat it in such a manner that the discussion of it shall neither be wearisome

nor offensive. To the possession of such negative merit, however great it may be, the author of the present discourse is by no means limited; for with considerable purity and elegance of style, he combines so commendable a zeal for the true honour and respectability of his profession, that his composition, so far from being tedious, cannot but be highly satisfactory to those who consider the promotion of that object as worthy of their attention.

The orator points out the close and necessary connexion which subsists between learning and physic. In the dark and barbarous ages which preceded the revival of letters in this country, the healing art was in a wretched and despicable state: but no sooner was the literature of Greece and Rome introduced and cultivated here, than physic began to be freed from ignorance and superstition; and daily acquiring new light from observation and dissection, this difficult art at length attained to that degree of elevation among the sister arts and sciences, which it has long held, and still continues to hold.

Having noticed this inseparable connexion between medical science and an acquaintance with general literature and with philosophy, the author proceeds to the more immediate subject of his discourse—the commemoration of those members who by their munificence have enriched, or by their celebrity have added lustre to the College. Foremost in this list stands Dr. Linacre, the founder, who amply merited all the panegyric here bestowed upon him. He was one of the most able and learned men of the age in which he lived, and to him we are chiefly indebted for the revival of letters in this island. His constant endeavour was to raise the art of medicine from the degradation to which it had been reduced by the ignorance and knavery of those who practised it; and to take care that thenceforward no one "temerè et otiosè fieret medicus."—His views were ably promoted by his successor, Dr. Kaye (Caius,) who closely followed his footsteps, in cultivating a knowledge of ancient literature, and had the additional merit of being the first to introduce into this country the study of anatomy; thus laying the foundation for the memorable discovery of Harvey. This great man having determined to consider nothing as an anatomical fact which either was not perceptible to the senses, or could not be clearly deduced and collected from certain experiments; and having strictly observed the rules of philosophising laid down by Bacon, afforded an example of the mode of treating one branch of medical science, which was afterwards followed by the observant and accurate Sydenham,

ham, in the examination and description of diseases, "Observationes sapientis illius medici non ex opinionum commentis confictæ sunt, non ex ineptiis scholarum conflatæ, sed ex ipso naturæ fonte derivatæ.—Quoties, autem, ægrotantium res in medium proferre illi libuit, morborumque cursus describere, adeò sincerè, adeò exquisitè ante oculos posuit, ut ipsi languentibus interesse atque assidere, ipsi fovere deficientes, ipsi remedia præcipere videamur."

Sydenham was followed by Dr. Freind, a man of deep and extensive learning, and indeed a true philosopher; for it was not only in the season of ease and tranquillity, that he prosecuted his various studies, but under the pressure of the heaviest calamities; so that those literary attainments, which had been the ornament of his more fortunate days, became his refuge and consolation in his adversity. From these difficulties he was rescued chiefly by the interposition and friendship of Dr. Mead, who, it is here justly remarked, seems to have been born for the advancement of every branch of science. Such were his professional abilities, and such the splendour of his reputation, that he was an object of universal attention, with foreigners as well as among his own countrymen; so that all, who "vel scientiam vel sanitatem quærebant," looked up to him in perfect confidence that their wishes would be fulfilled.

The author is next led to the mention of those whose merits have come within his own observation. Dr. Warren is celebrated as having been endued with extraordinary strength of understanding, quickness of perception, and comprehension; with a sound judgment, and a retentive memory. He had a mind richly stored with medical knowledge; so that, as occasion required, every aid which the art afforded instantly occurred to his recollection: and so highly conciliating were his manners, that there was no one who had recourse to him as a physician, but in future desired him for a companion and a friend.—"Si qui medicamentis non cessissent dolores, permulcebat eos et consopiebat hortationibus et alloquio.—Tantam denique morum comitatem et facilitatem habuit, ut nemo eo semel usus esset medico, quin socium voluerit et amicum."

The useful labours of Sir G. Baker relative to the late reformation of the Pharmacopœia, his Dissertation (written in the purest Latinity) de Catarrho et Dysenteria, and his Essays published in the Transactions of the College, are noticed with due praise; and lastly, a proper tribute of respect is paid to the venerable Dr. Heberden, who first set on foot the Transactions of the College, (the discontinuance of which we lament

with Dr. Vaughan,) and of whom it is difficult to say which is greatest, his classical learning, his knowledge of antiquities and natural philosophy, or his skill and science in medicine.

This oration concludes with remarks on the qualifications which are sometimes sufficient to elevate their possessors from a subordinate station to the highest honours and emoluments in the medical profession. We subjoin an extract on this subject in the author's own words:

"Populare arbitrium in famam et fortunas medicorum dominatum esse, et favorem publicum indignis non rarò contigisse jàm olim questus est Hippocrates; eidem artis conditioni apud suos indoluit Galenus. Profectò, socii ornatissimi, si isti patres medicinæ in vivis forent hæc nostra tempora ab antiquis non prorsùs discrepare agnoscerent ultrò et testarentur —neque enim quemquam vestrûm latet homunciones quosdam nec doctos nec eductos liberè, etiam illotis manibus, medicinæ altaria tangere ausos esse, et stupore vulgi factos nobiles, rapido cursu pervenisse ad gratiam, ad famam, ad amplitudinem Ità inauspicatò fit, ut ingenio ritè nutrito, multiplici rerum cognitione, probitate, et modestiâ priorem aliquando sedem teneant frons perfricta, sedulitas, obsequium, assentatio."

So far as this observation applies only to the *pseudiatri*, who are the objects of it, we readily admit that the castigation, though severe, is well bestowed: but is the author aware that it contains a direct charge of the most culpable neglect of duty on the part of that learned body, of which himself is so respectable a member? The College of Physicians was instituted, not for the benefit of the individuals who may compose it, but for the good of the community; certain rights and privileges have been granted to them, on condition that they shall watch over those who undertake the charge of the public health, and shall take care that this be not sacrificed to the mercenary views of ignorant and unprincipled empirics. If, then, there be such rascals (this we believe is the import of "homunciones,") who neither are learned, nor have even had the means of becoming so, why has not the College interposed, and by employing the means intrusted to it for that purpose, roused the vulgar from their stupor, and arrested the rapid course of the adventurers by whom the altars of medicine have thus been polluted?

The final admonitions of the author to his brethren are so well expressed, and so much to the purpose, that we shall lay them before our readers:

"Vos pergite in istâ quam instituistis viâ; pergite artem vestràm

vestràm diligentiâ excolere, tueri auctoritate, ornare moribus—nec satìs sit vobis hæreditatem a majoribus acceptam posteris integram et incontaminatam tradere, nisi et detis operam ut per vos ipsos locupletentur posteri.

" Oro, denique, vos et obtestor, ut fixum animo et quasi insculptum habeatis medicinam liberalem una cum literis renatam esse, nec nisi cum literis interituram."

ART. II. *Observations on the Bile and its Diseases, and on the Economy of the Liver*; *read at the Royal College of Physicians, as the Gulstonian Lecture of the Year* 1799. By RICHARD POWELL, M. D. Fellow of the College, &c. Octavo. 180 pages. RIVINGTONS, London. 1800. Price 4*s*.

AFTER the observations of Spigelius, Glisson, Bartholine, and Bianchi, we are not to expect from any writer of the present day much new light on the structure and economy of the liver. But though no chance is left to a modern author for distinguishing himself here in the path of anatomy, yet a field remained for chemical investigation, and this Dr. P. appears to have successfully cultivated, even after M'Lurg, White, and Saunders. We shall pass over that part of the present treatise which relates to the anatomy of this viscus, and its uses; only remarking that our author is of opinion, that the bile is secreted, not, as is commonly believed, from the vena portæ, but from the hepatic artery. As a strong anatomical fact in support of this opinion, he cites the case recorded by Mr. Abernethy in the Philosophical Transactions for 1793, where, on dissection, the vena portæ was entirely wanting, yet good and perfect bile was found in the gall-bladder. In regard to the vena portæ, he is " led to avow, in part, the same idea that the ancients entertained, and to consider it as subservient to the purposes of the circulation, as a sort of reservoir to the heart, which prevents the rapid return of blood to the right auricle, which would take place without it; and, under circumstances of difficulty or obstruction to its passage through the lungs, allowing, by its distention, of a considerable accumulation for their relief.

" I have been chiefly led to this opinion," the author says, " by an attention to the circumstances of some diseases; my own experience, however, has been hitherto too limited to give it the stability it requires, but still there are some circumstances

stances which are too striking, and have occurred too often, to be the effect of chance alone.

"Authors have established a certain connexion in their symptoms between many diseases of the liver and of the lungs, some of which have so much in common as to render discrimination difficult; but it has generally been thought in such cases, that the liver was the original seat of complaint. I know but of one passage where the contrary has been suspected, and this is given by Dr. Andree, who quotes the opinion of a Mr. Pasley, a practitioner in India, that in all confirmed diseases of the lungs the liver is affected.

"In examining phthisical patients, or such as have, from any cause, had the lungs rendered less pervious to the circulating blood, I have very frequently found the liver enlarged in its size, and looser in its texture, in some very considerably so, and appearing little more than a connected mass of blood, readily giving way, and breaking down on the application of slight pressure; and in other cases, injections pushed into the vena portæ have seemed to distend the liver more readily and completely than where no disease of the lungs subsisted. The more violent of these affections of the lungs are also attended very commonly with great fulness of the abdomen, and tension, especially about the region of the liver. I have a case in my recollection, where the formation of matter to a vast extent had taken place in the right lung, and had entirely destroyed it, in which the affection of the abdomen was so striking as to induce the medical attendants, who were high in fame and ability, to rub thereon large quantities of mercurial ointment.

"The liver, under this point of view, will rise in its importance in the animal economy; it is not to be considered as a mere glandular mass, suited to the secretion of a particular fluid, but as ministering to, and in a certain degree regulating the circulation of the blood. Perhaps these opinions do not, from their nature, admit of perfect demonstrative proof; it will be enough if, in the present instance, they carry with them probability, and lead to the farther investigation of those physiologists whose reflections bring them to the same conclusion with Haller—Non possum non suspicari, præter bilis secretionem esse hepatis peculiarem utilitatem."

On the chemical properties of the bile, we meet with the following curious observations and experiments:

"Bile is wholly soluble in water into a transparent liquor, diminishing

diminishing in colour in proportion to the degree of its dilution.

" Heat separates the water it originally contained, and if collected it resembles pure water, with a faint impregnation from some odorous matter.

" As the water evaporates, the remaining parts thicken into a brown tough extractive residue; if the heat be greater than is necessary for this evaporation, and be longer continued, it dries more perfectly into a friable pitchy mass, which then seems to be very considerably changed in its nature.

" The tough extract, if exposed to the air, softens and attracts moisture from it, readily dissolves in water, and appears to have undergone no change but what arose from its abstraction.

" Alkohol separates from bile a great abundance of white membranous flocculi, dissolving at the same time all the colouring particles, and assuming a tint of colour proportionate to their quantity and shade.

" The precipitate is separable from the coloured liquor by filtration; it generally retains some of the colouring particles so intimately united to it at the time of its assumption of a solid form, that it requires a very large proportion of alkohol to abstract it entirely; this, however, may be done, and then it resembles the coagulum produced in serum of the blood by the same addition.

" Heat coagulates serous matter, even if it be mixed with four fifths of water; sometimes, but not commonly, it produces the same effect on bile, yet there is always a larger proportion of serum in the bile than is necessary for this purpose. It seems, therefore, that the presence of something prevents the effect of heat upon the serum, but admits of that of alkohol. Extract of bile, prepared from the tincture, was dissolved in a mixture of one part serum and four water, and the mixture was heated sufficiently for the coagulation of a similar one, to which no bile had been added; in this case no coagulation followed; it was prevented by the presence of the matter of bile, but this power was limited, for with a larger proportion of serum the usual effect followed.

" The relative proportion of this coagulable matter admits of considerable variation, and it is indicated by the spissitude of the bile, and by the effect of alkohol; sometimes it is as thin as water, and alkohol produces but a slight change; at others it is almost as tenacious as bird-lime, and the affection by alkohol is proportionally large.

"The alkohol distilled from the tincture passes colourless, but has acquired a slight impregnation of a faintly odorous matter.

"After this distillation there remains a dark-coloured residue of an intensely bitter, and joined with it a sweet taste; it is perfectly soluble, both in water and in alkohol, in all proportions.

"By this latter process, the part of bile on which its peculiar characters depend, is separated from its serous and gelatinous part.

"If a solution of the spirituous extract of bile be dropped into very dilute muriatic acid, no effervescence takes place, but an abundant cloudy precipitate immediately forms, which is deep in its colour, according to the quantity of matter precipitated; when this is very small it is a dirty white, when more abundant a deep brown.

"Other acids produce a similar effect, but I speak more particularly of the muriatic, because it cannot be supposed to influence the result by its own decomposition.

"The fact that bile is coagulable by acids and by alkohol is generally known, but the two effects have been commonly confounded together, and I know not that any one has shown how the agency of the one goes beyond that of the other, or examined the matter precipitable by acids, after that coagulable by alkohol has been separated.

"The clear filtered liquor yielded, on evaporation, cubic crystals of muriat of soda; when acetic acid was employed, acetate of soda was formed.

"Thus it is proved that soda is present in the bile, and that it is not combined with carbonic acid, which would have produced effervescence, but with another matter which acids dislodge by their superior affinity.

"It has been improperly adduced, in proof of the existence of an alkali in bile, that it assumes a green tinge when mixed with vegetable blue infusions; this change is probably deceptive, and at best very uncertain, for it may be occasioned as well by the bare mixture of the two colours, the yellow and the blue, as by the agency of an alkali.

"From the employment of bile in the arts for the removal of greasy matters from cloth, and especially in preparing it, by such abstraction, for the reception of various colouring substances, it has been considered as a natural soap, and inferred that it must be, like soap, composed of alkali and oil. From this fact, too, it has been supposed that its use in the animal

animal body was explicable, and that it served to unite together the oily and aqueous parts of the food. The accuracy of the analogy between bile and soap might be questioned upon the ground that the same effect is often produced by the use of substances which contain neither alkali nor oil, as in the process of fulling by fullers' earth, and the incorporation of oils and water by trituration with mucilaginous matters. The opinion, however, has been more completely overthrown by experiment. Human bile, under no circumstance whatever, if assisted by trituration or heat, can incorporate the least portion of oil with water, the oil speedily separating and rising to the surface. It was thought by Schrœder, that the presence of saliva, or the analogous pancreatic juice, might influence the result, and he tried the experiment without any difference in the effect.

" Painters use bile for mixing their colours, and thus rendering them fitter for working; and hence it has been deduced that it resolves and attenuates resinous and gummy substances: but it has been found not actually to possess any such property; for neither ammoniac, nor myrrh, nor balsam of Peru were dissolved by it in the least; and though some apparent union was produced during a long trituration of it with resin of jalap, there was an almost immediate separation when it ceased.

" The precipitate from the solution of spirituous extract by muriatic acid, either collected by subsidence or filtration, had a deep dirty brown colour, and somewhat of a fibrous appearance, and its taste was intensely bitter.

" It was not inflammable, but fused upon the application of heat, and left a small cindery residue.

" Water did not combine with it, it remained distinct, and sank to the bottom.

" Alkohol immediately dissolved a great abundance of it, and assumed a bright brown colour. The tincture, when dropped into water, formed an abundant precipitation. The evaporation of the tincture gave a residuary mass of a deep brown colour, and intensely bitter taste.

" Essential oil of turpentine did not unite with it.

" Alkali (it mattered little whether potash or soda) immediately dissolved it, and formed a brown liquor, which appeared very accurately to resemble the solution of bile, deprived only of its serous part.

" If a clear aqueous solution of the spirituous extract and lime-water was mixed together, a turbidity immediately followed,

lowed, and a brown flaky sort of matter collected at the bottom of the vessel.

" Diluted muriatic acid abstracted the lime, and the insoluble peculiar principle of the bile remained separate.

" It appears, therefore, that the attraction of lime for this matter is stronger than that of the alkali, which subsists in the original compound.

" The natural compound of this bilious matter and alkali being mixed with solutions of metallic salts, as those of silver, mercury, copper, or lead, interchanged principles by a double attractive force, and yielded precipitates. Acetate of lead, for example, gave a very copious one, which had a dirty brown tinge in the solution, soon subsided to the bottom, and dried into a deep brown mass, which, on being heated to redness, swelled, liquefied, and at last left a cinder, in which small globules of the metal were visible.

" The soda, then, of the bile, is combined with another substance, the compound is soluble in water, and gives to this secretion its peculiar characters. This other substance has been considered as a resin, to which class of substances it has not sufficient affinity to justify the arrangement. It liquefies in a lower temperature, it can scarcely be called inflammable, it is insoluble in oil of turpentine, and unites abundantly and readily with alkalies. It seems rather to be a peculiar modification of animal matter, characterized by its bitter taste, and other appropriate relations, and to bear a strong analogy to a bitter matter, which exists distinct from every other in some vegetables, as the wood of the quassia amara. It may perhaps be denominated the animal bitter principle."

Among the biliary diseases which have engaged Dr. Powell's attention in this tract, are, jaundice, gall-stones, cholera, diarrhœa; bile altered in its qualities, such as thin, aqueous bile, thick, colourless, mucous bile, bile of a preternatural density, atrabilis. The last of the diseases noticed in these Observations is, the presence of blood in the biliary canals, in which case the blood is evacuated by the stomach and intestines.

Biliary concretions, according to this author, may be divided into the crystallized, deposited, and amorphous. The two first, he thinks, are similar in their composition; but in the last he has not been able to detect that peculiar matter which characterizes the others. The two first are of various shades from white to dark brown; the last is of a black, or greenish black colour. Of the crystallized calculi, the following are the chemical characters:

" On

"On bringing them near to a burning body they liquefied, and then took fire, burning like common wax, but with a thick white smoke, and unpleasant animal smell.

"Water did not dissolve or affect them in the least, even when its temperature was increased to boiling.

"Alkohol, in ordinary temperatures (that is, under 60°,) dissolved very little or none; but, when heated to 167°, it entirely dissolved the whole of some of them. Fourcroy says, that it requires nineteen parts of alkohol for the solution of one part of this concretion. As the liquor cooled, the whole, or very nearly so, of the dissolved matter precipitated; and if the change of temperature was slowly and gradually effected, it assumed the form of hexangular plates; if somewhat more rapidly, it had rather a tendency to shoot into spicular crystals. This hexangular plate may probably be considered as the natural and appropriate form of crystal of this matter; for in some concretions a plate may occasionally be found with one or two similar angles, sufficiently distinct for observation.

"Sulphuric æther entirely and readily dissolved it, and the solution was permanent as long as the æther retained its liquid form; but as it evaporated, the dissolved matter remained, and, crystallizing, generally took its spicular modification of form, shooting beautifully in radii from different centres on the sides of the containing glass.

"Essential oils, and particularly that of turpentine, were others of its solvents. A portion of a solution in this latter having been left exposed in a shallow glass pan for a few days of the summer, had coated it with a great number of small radiated crystalline masses, all of which were exactly circular in their outline, and all arose from their own central points.

"Sulphuric, muriatic, and oxymuriatic acids did not, in ordinary temperatures, affect the form, diminish the weight, or appear to have received any impregnation. In a boiling heat the sulphuric acid did more; it blackened and dissolved it, with the same apparent phenomena that it exerts upon vegetable matter, the perfect decomposition of the concretion, the separation of its carbone, and the extrication of sulphurous acid gas.

"Solutions of soda and potash did not act upon these concretions in the least; and it seems to be in the altered relation of this matter to alkalies, compared to that of the bitter principle of bile, that the great difference between them consists.

"When these concretions were immersed in strong and pure nitric acid, they were immediately acted upon; their

aggregation was broken down, the liquor became as it were muddy, and a portion of greenish liquid oil collected upon the surface; this in time dissolved, particularly if exposed in a somewhat increased temperature, with a very copious extrication of the orange-coloured fumes of nitrous acid; the liquor became transparent, and had its colour considerably deepened towards that of orange.

"This acid solution, dropped into a large proportion of distilled water, gave an immediate precipitation of white, opaque, membranous films, which subsided to the bottom, and could be collected readily to the quantity of the concretion subjected to the action of the acid.

"This matter on drying became hard and friable, and possessed scarce any perceptible bitterness of taste. Being collected to the amount of a few grains, it was tried in various ways. It was not inflammable like the original matter, but it liquefied, grew black, and, after a red heat, had left only a very slight residuary cinder. It was immediately soluble in æther and in alkohol; and these solutions, but more especially the latter, had acquired a very striking yellowness of tinge, on the evaporation of the alkohol; before the whole of the liquor had passed over, it gave a whitish pulverulent precipitate, as the resins do.

"On the addition of a small quantity of a solution, either of soda or potash, to this matter, it was immediately dissolved, and the liquor assumed a deep reddish brown colour; this, when the proportion of alkali was accurate, had also a decidedly bitter taste. An acid added to this coloured solution gave a white precipitate, which more alkali again dissolved with assumption of the brown colour.

"The concretion, therefore, after having been submitted to the agency of nitric acid, was essentially altered in its characters, and brought into a state much more nearly resembling that matter which is in bile, combined with soda. It had become soluble in alkali, with the assumption of some bitterness of taste, and of the peculiar colour of bile, in which relations to the same agent it had not previously stood. The nitric acid, too, had been deprived of a certain portion of its oxygen, for its previously white fumes were then converted into orange ones. Independent of this alteration of the acid, the analogy of other phenomena would lead us to the belief that the matter had received a larger portion of this particular principle. The tendency of every substance to combine with alkalies seems to increase in proportion to the quantity of oxy-

gen with which they are combined. In the bleaching of linen, for instance, this combination is effected before alkalies can act upon or dissolve the colouring particles, as the use of the oxymuriatic acid, and the effects it produces, have most decisively established.

"But even if the fixation of oxygen be admitted, it may be asked, whether this be all the change which takes place, and whether the base remains unaltered, except in this one particular? If this was all, it seemed probable that the oxygenation of this species of biliary concretion ought also to be effected by other, and perhaps by more simple and satisfactory methods, as by the use of oxymuriatic acid, or its combinations; and this idea would also perhaps be favoured by considering that the original matter is inflammable, and the altered matter not so.

"With this view I nearly filled a small bottle with oxymuriatic acid, and added thereto a few grains of this concretion: in order to assist the decomposition of this acid, I exposed it to a strong light, which is found, under other circumstances, to be strikingly favourable to the transfer of its oxygen, and continued the exposure for three days: the acid was altered, it had lost its superabundance of oxygen, and had become common muriatic acid; but this liberated oxygen did not appear to have combined with the matter of the concretion, which was not more soluble in alkali than before, or altered at all in its relation to æther, alkohol, or other solvents of it.

"As a difference of temperature might considerably influence the affinities of these several principles, I triturated a small portion of this concretion, so as to mix it intimately with oxymuriat of potash, and then having added a small quantity of water, exposed the mixture to 212°, for a considerable time, without apparently effecting this alteration. Another portion of the same mixture was left exposed to light for several weeks, but this transfer of oxygen had not taken place.

"It was farther desirable, upon the same principle, to try the converse of the former experiments, to endeavour to deprive bile of its oxygen, and see whether it was by this means changed into a matter resembling its concretions. For this purpose, I mixed bile with water, impregnated with hydro-sulfure, under various circumstances and temperatures, but without success. There was, after long standing, some precipitation of thin films, but it did not seem to be analogous to the matter of concretions.

"Upon the whole, therefore, there are many reasons why we

we should be cautious in admitting the conclusion that the difference between biliary concretion and matter of bile depends solely upon the relatively increased proportion of oxygen in the latter. If other animal matter did not stand to nitric acid in a very similar relation, if other less suspicious modes of adding oxygen produced the same effect, or if its abstraction left any thing like concretion, the theory would be perfect; as it stands here it is very deficient, but still it corresponds so well with various strong analogies, and so strikingly explains all that we know of its production and cure, that though I may be condemned for the adoption of a hasty and unfounded opinion, I cannot help pressing it as a point still deserving future consideration."

The following are the chemical characters of the black amorphous calculi:

"They are remarkably friable, feel gritty in the mouth, and have no perceptible bitterness or other peculiarity of taste.

"They do not inflame, and almost generally sink in water, which was noted both by Bianchi and Morgagni.

"Alkohol or water, even when boiling, acquire no impregnation, and are not altered in colour.

"Æther assumes a deep green colour, but even after a digestion of many days with repeated additions, the concretion seems to retain its original state and colour.

"The coloured ethereal solution yields no crystals on evaporation, but an extractive mass which accurately resembles bile.

"The residuary skeleton of these concretions appears to be pure carbone in every other respect, and on being exposed in a jar of oxygen gas inverted over mercury, to the focus of a burning lens, it is, with the exception of a slight film, converted into carbonic acid gas.

"Alkalies dissolve a considerable portion of these concretions, and form a deep brown coloured liquor, which, when diluted, has a green tinge.

"Nitric acid, assisted by heat, dissolves them readily, and gives a bright reddish brown solution resembling that of bile.

"The ashes of a small portion of this concretion, which had been burnt in the focus of a burning lens, had a little water added to them, and received an alkaline impregnation, which was evident from the alteration of paper tinged by the blue colour of violets.

"In many respects, therefore, this species of concretion gave proofs of its containing actual bile, but they are not composed of dried bile alone; for the bare artificial exsiccation of this

this fluid, however long continued and in a greater heat than it is ever exposed to in the body, cannot bring it into a state at all similar to this, or even render it insoluble in water; the diseased change is therefore different in its nature, and mixed with the matter of bile: there appears to be a great but variable proportion of carbone, upon which the peculiarities of these concretions depend.

"Independent of the presence of carbone, the bile itself seems to have here also undergone a change from its natural state beyond what simple inspissation can produce; and we have in the same bladder the several gradations of natural bile, altered bile as it enters into the composition of the concretion, and carbone. May it be inferred from hence that the natural bile does in some way or other undergo this alteration in the bladder, independent of the state in which it is secreted; and what are the circumstances determining it? This kind of concretion, differing as it does from the former, has not hitherto been sufficiently noted or connected with the appearances during life to allow of any reasoning on the causes of its formation."

These experiments of Dr. Powell are very curious and interesting; and though no practical advantage should result from such knowledge, it is at least pleasing and satisfactory to the philosophical physician to know what are the component parts and characteristic properties of the bile and its concretions. It would have added much to the value of the present treatise, if the author, in an appendix, had given an abstract from *Sœmmering*'s Essay *De Concrementis biliariis Corporis humani*, published in 1795.

The treatment directed by the author in the above enumerated biliary affections is so conformable to that of the best practitioners, that we deem it unnecessary to give an account of it. We shall only observe, that in a case of jaundice from biliary concretions, under the author's care, he employed the diluted *nitric acid* with apparent advantage. On this subject he remarks, that "the administration of acids in certain cases of jaundice is by no means a new practice, and the report of Baglivi may strengthen the probability of their being useful." Dr. Powell here quotes the following passage from Baglivi: "*Acidulas* in ictero a pluribus laudatas vidi authoribus," Prax. Med. l. i. cap. 9. But, by *acidulæ*, Baglivi means mineral waters, not acids; we do not therefore see how it can be inferred hence, that the recommendation of acids in diseases of the liver is no new practice.

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We repeat it again, that the most valuable part of this treatise (which is written throughout with great perspicuity) is the chemical part.

Art. III. Dr. Willan's *Reports on the Diseases in London.*

(Concluded from Page 133.)

We pass on to the author's account of diseases in the year 1799. The first part which strikes us as interesting, is his description of pemphigus infantilis: "This disorder," he says, "coincides in its appearances with the vesicular fever, described by medical writers on the continent. It begins two or three days after birth in weak, emaciated infants, with large oblong vesicles, containing a semitransparent lymph, and surrounded by a dark-red or livid base. The vesicles are often numerous, and appear successively on the neck, breast, thighs, and abdomen. When broken, they are succeeded by spreading and painful ulcerations. The pain, fever, and restlessness, attendant on the malady, were not alleviated by the bark, or other remedies employed for it; but, in every case I have yet seen, extinguished life within seven or eight days."

On the subject of constipation, arising from scirrhosity, or strictures of some portion of the intestinal canal, and particularly of the colon, about its sigmoid flexure, near its termination in the rectum, our author remarks, that the insertion of an unyielding tallow candle, though often practised, has been generally found painful and inefficacious. For this purpose, he recommends the employment of a bougie thirteen inches long, and of a proportionate strength; which should be cautiously introduced by a surgeon. In cases of chlorosis, and in other cases in which iron is usually prescribed, Dr. W. recommends (in preference to Griffiths's celebrated solution of vitriolated iron) the ferrum præcipitatum; which is obtained by dissolving three pounds of sulphat of iron (vitriolated iron) in six gallons of distilled water, with the addition of two ounces of sulphuric (vitriolic) acid, which facilitates the solution. The iron is then precipitated by means of the kali pp. (3 lbs,) care being taken not to add too much of the kali; as in that case a portion of the iron would be re-dissolved. The precipitate is washed with hot distilled water, (which takes up all the sulphat of potash or vitriolated kali,) and then dried. The dose is, for

for infants, five grains to be given in honey or conserve of oranges; adults, from eight to fifteen grains.

Jacquin has recommended a similar preparation of iron in his Pharmaceutical Chemistry; with this difference, that, being aware of the insolubility of a perfect calx of iron in the human stomach, the Vienna professor has directed the precipitate to be put into a covered crucible mixed with a little oil, and subjected to a red heat. By this process the precipitate regains something of its metallic properties, being now but an imperfect calx, still, however, in the form of a fine powder, well adapted to medicinal use. After all, we do not know what material advantage this troublesome preparation possesses over the common rust of iron.

This year (1799) the measles were very prevalent. Two instances are mentioned of the same persons having this eruptive disorder twice. They were both under seven years of age, and had the measles very severely from a female servant, in the month of July 1799; though they had gone through the disease in a mild way, in 1797. They then caught the infection from a girl who came to spend with them the Midsummer vacation from a school, where the young ladies had been ill of the measles. Dr. W. adds, that similar instances of the disease having been taken a second time have been mentioned to him by others. He infers that unless the symptoms are severe, the constitution is not proof against a future attack. In the autumn of 1799, malignant, contagious fevers were very general, together with the scarlatina, bilious vomitings, &c. A case of hydrophobia occurred: an account of the symptoms and dissection is given: but so many cases of this sort are upon record, that we deem it superfluous to take particular notice of this. We should have been glad to have seen some observations relative to the treatment of this disorder. In the malignant fevers above mentioned the Peruvian bark was of little service, unless emetics had been administered before the end of the fourth day. Several of the patients were washed twice a day with cold water and vinegar, but the relief was only temporary. Blisters were of great utility.

The Reports for this year close with some observations on pericrania, vertigo, palpitatio, angina pectoris, chorea, and lethargy.

A. D. 1800. The malignant fevers which began in the autumn of the preceding year, continued to rage in the beginning of this year. The author gives a melancholy, but, we believe, a true picture of the miserable condition of poor per-

sons, labouring under the combined afflictions of penury and infection: he points out the danger to which all ranks of society are exposed from the accumulation of contagion in the habitations of the poor. As our public hospitals are barred against the admission of patients having contagious diseases, there is no refuge for these unhappy objects but the parish *workhouse*.

"Alas!" exclaims the author, "the fever is already making its ravages there.—What therefore is to be done?—All these mischiefs admit of ready alleviation, and might, with proper management, be removed at a moderate expense. Let houses of recovery be established in open, airy situations, at some distance from other buildings, but adjoining to different districts of the metropolis; to be supported either at the joint expense of the several parishes within each district, or by a voluntary subscription among its principal inhabitants. As soon as any person exhibits symptoms of a fever from infection, let him be instantly removed into the house of recovery; where, being washed, and put, with clean linen, into a fresh bed, he will soon be freed from his complaints, and able to rejoin his wife and family. To them, in the mean time, a loan of bedding should be made till their own bed is cleansed, and till the walls and floor are washed or scoured. The revenue necessary to support houses instituted on such a plan is not so great as might be imagined. Both the utility and expense of them have been already put to a noble trial by the merchants and manufacturers of the populous town of Manchester. Their example deserves to be followed in this metropolis, and all other great cities; the necessity of a receptacle for contagious fevers being always proportioned to the magnitude of the place."

For further observations on this important subject, Dr. W. refers to the writings of Dr. Ferriar, to the Reports of the Society for bettering the Condition of the Poor, and to a Plan for Houses of Recovery in the Vicinity of London, just published by Dr. T. A. Murray.

At p. 267 we meet with some observations on the acute hydrocephalus, with a reference to Dr. Quin's very excellent treatise on this disorder, cases of which were unusually frequent during the spring of 1800, among children from 2 to 12 years of age. Three patients out of eight recovered. Perpetual blisters on the head, leeches, in some cases, [Quere, in the successful cases?] mercurial frictions, in others calomel frequently repeated, seemed to be the most efficacious remedies. We are

surprised that no mention is made of the digitalis among the means of cure.

It will be remembered that the summer of this year (1800) was remarkably hot and dry; towards the end of August a sudden change of temperature, with rain, took place; and a new series of epidemic complaints, with symptoms of unexampled violence, succeeded. These were catarrh, sore-throat, pleurisy, peripneumony, inflammation of the liver and intestines, agues, hæmorrhagies, diarrhœa, cholera, and dysentery. A case of tetanus occurred in July, not occasioned by any local injury. The only apparent exciting cause was distress of mind. The patient died on the 8th day of the disease, exhausted with pain, tremors, watchfulness, delirium, and strong perspirations. Has irregular menstruation any share in producing this species of tetanus? This patient was a female. In some instances this disorder seems to partake of the nature of hysteria. We wish Dr. W. had informed us what method of treatment he employed.

The epidemical dysentery was in many instances attended with excruciating pain of the bowels, perpetual but small evacuations, and a very quick pulse. In other instances it assumed a milder form. It did not appear to be contagious; nor was it fatal in any case under the author's observation. Neither leeches to the abdomen nor fomentations were of use: the only mode of relief was by giving, alternately, purgatives and opiates. The purgatives to which our author gave the preference, were vitriolated magnesia, ol. ricini, and calomel: strong doses were necessary. The opiates were frequently repeated, and in full doses.

A bad case of pemphigus occurred in a young woman: the vesicles were numerous over various parts of the body, especially the face. Her pulse was very quick, and she was sometimes delirious. The fever and eruptive stage lasted about eight days; but more than six weeks elapsed before she got well. In the vesicated places the cuticle gradually peeled off, and the skin of her fingers and toes came off entire, together with the nails.

Reflecting on the frequency of cutaneous diseases among the lower orders of the community, as originating from the habitual neglect of cleanliness (in conjunction with bad diet,) Dr. W. suggests the propriety of establishing in the metropolis public warm and vapour baths, in imitation of those of ancient Greece and Rome, and in modern times of Russia. Of the vapour baths in the last-mentioned country a particular de-

scription is given in a quotation from Mr. Tooke's Survey of Russia.

Next follow some observations on the vaccine pock, the inoculation of which, (our author says,) "when properly conducted, affords a decided and permanent security from the infection of the small-pox."

"This mode of inoculating, in its extension over Great Britain, and other countries, must have been often conducted by persons unacquainted with the appearance and course of the disease, some of whom perhaps took the matter they employed at second or third hand. Much confusion, and several disagreeable circumstances, have necessarily arisen, which brought the practice into temporary discredit. Within the vicinity of London, unfavourable cases have occurred from the insertion of wrong matter, or of fluid taken from vaccine pustules at an improper time, from using impure lancets, from making too large incisions, &c. Medical practitioners, since they had the opportunity of being better acquainted with the form of the vaccine pock, of ascertaining the easiest process in inoculating it, and of readily obtaining genuine matter, have seldom fallen into error; nor do we now hear of inflammation, and swelling of the arms, of alarming eruptions, nor of phagedenic ulcers at the decline of the disorder. It has been suggested that the variolous and vaccine fluids may contaminate each other, or, by acting on the human constitution at the same time, produce an hybrid disease. This suggestion does not stand the test of experiment. When the two fluids are rubbed together, and inoculated by a lancet dipped into the mixture, sometimes the vaccine pock, sometimes a pustule of small-pox, has been produced, the genuine characteristics being, in either case, retained throughout. Farther, when vaccine and variolous matter are inserted under the skin, so nearly together that the two pustules, thence formed, enlarge till they become one, by inoculating afterwards with the fluid taken from one side of it, the vaccine pock will alone be produced; whereas the fluid taken from the other side excites a variolous pustule on the arm of the person inoculated, and an eruption of small-pox, in the usual manner, over the body. In an adult female, at the Inoculation Hospital, the casual small-pox appeared six days after the vaccine disease had been inoculated, and two variolous pustules arose within the circumference of the vaccine pock: when these were maturated, fluid taken from them on the point of a lancet, and inoculated into another person, produced

duced the regular small-pox: at the same time, fluid taken from the vaccine pock, at a little distance from the supervening pustules, gave the vaccine disease in its genuine form, without any eruption.

"It is now fully ascertained that inoculation with variolous matter, soon after exposure to the contagion of small-pox, supersedes the infection, and produces a mild disease. During the last summer, I tried, in two instances, whether an immediate inoculation with vaccine fluid would have the same favourable effect. This plan was not successful, both patients having been affected with the confluent small-pox, before the vaccine pustule arrived at its height. Other practitioners, I understand, have been, in like manner, disappointed, whose experience may therefore serve as a caution to their fellow-labourers not to make, unnecessarily, a similar trial in dubious situations. The vaccine pock, inoculated before the febrile stage of other eruptive diseases, has little or no effect in retarding their progress, while passing through its own course. Having stated that vaccine inoculation will not always supersede the natural small-pox, in persons at the same time exposed to contagion, I may advance another step, and observe, that, if vaccine and variolous matter be inoculated at the same time, or within a week of each other, into the same person, the vaccine pock goes through its regular stages, and the variolous pustule on the arm, after exhibiting the usual appearances, is succeeded by an eruption of small-pox over the surface of the body. From this fact, which has been confirmed by hundreds of trials, some inferences may be deduced, which are of material importance. 1. That vaccine fluid should not be taken, for the purpose of inoculation, on a lancet which had been previously employed in inoculating the small-pox. 2. That the variolous and vaccine virus do not interfere with each other's action on the human constitution, while they are merely in progress, without having had their full operation. 3. That the vaccine inoculation is not a preventive with regard to the small-pox, until its course be completed, or, at least, till the inflammation round the pock be on the decline. From some trials I know that the application of the matter of small-pox will produce no effect after the ninth day of vaccine inoculation: the exact time of this process, at which the action of the variolous virus is precluded, might be ascertained by farther experiments.

"What has been above stated is, I think, confirmed by several of the cases in Dr. Woodville's first Report on the variola

variola vaccina, and may serve as an answer to various inquiries and speculations on the subject. Few or none of the out-patients of the Hospital, inoculated with the vaccine pock, have pustules over the body. Dr. Woodville likewise observes, (Observations on the Cow-pox, page 24,) 'In my private 'practice of inoculation for the cow-pox, which has been 'very extensive, I have not met with one instance in which 'any pustules, resembling those of the small-pox, appeared.' My own experience coincides perfectly with this statement: in different families I have seen inoculated with vaccine fluid, occasionally selected by myself at the Hospital, and taken on new lancets, about sixty persons, none of whom had pustular eruptions, at the maturation of the pock formed by the puncture. Patients admitted into the Inoculation Hospital have often pustules on the body, after vaccine matter has been inserted in the arm, from the following cause: They are mostly persons from the country, who, alarmed on finding some of the inhabitants of the houses where they lodge, or visit, affected with the small-pox, endeavour to anticipate the disorder by means of inoculation, at the asylum opened to them by public benevolence. But the application is probably too late: some of them have already received the infection, and, before the vaccine pock can reach the end of its second stage, an eruption of variolous pustules takes place in the usual manner. In attending at the Hospital last summer, while Dr. Woodville was on his mission to Paris, I observed four instances of persons so circumstanced, in whom the eruptions appeared, on different days, between the third and the eighth from inoculation. The pustules were distinct, but large, and full of matter. After their appearance, I thought the tumor, and erythema, round the vaccine pock, in one or two patients, did not become quite so considerable, or extensive, as in unmixed cases of vaccine inoculation. When the small-pox and vaccine disease had been inoculated about the same time, the eruptions were, in all the cases I saw at the Hospital, of the species vulgarly termed horn-pock, being hard, and semitransparent. They contained little fluid, and, though of long duration, did not maturate, or break by suppuration. Whether we should, from these premises, infer that the two diseases, when communicated together, limit each other's operation on the human body, so that the small-pox may be checked, or the vaccine disease be variolated by inoculation, by exposure to an infected atmosphere, &c. or whether, as I before ventured to conjecture, they go through their course,

in

in the same person, at the same time, without influencing each other, must be decided by farther experiments. On this subject, I trust, the physician of the Small-pox Hospital, who has the best opportunity of employing the necessary tests, will use every exertion in his power; and communicate his observations to the public, with his usual candour."

We are next presented with remarks on the simple puerperal fever, which, our author says, requires the same mode of treatment as the peritoneal inflammation; with remarks also on the painful swelling of the lower extremities of lying-in women, termed puerperal œdema, (by others phlegmatia dolens.) This affection is very common. In regard to the treatment, it is observed, that the pain may often be relieved, and the further tumefaction prevented, by a considerable number of leeches applied to the groin and upper part of the thigh, at the commencement of the disorder. Among other palliative means, we think the author might have mentioned calomel and opium.

This miscellaneous performance concludes with the following reflections: "The General Bill of Mortality, for the year 1800, specifies a remarkable increase of deaths from fevers, and is a collateral proof of the extensive diffusion and virulence of contagious fevers since the autumn of 1799. Their fatality was continued to the end of 1800, no settled frost having taken place in the month of December. The total number of deaths in 1799 was less than that in 1800 by 4934. This last year appears to have been most destructive to infants under two years of age, and to old people; 6657 having died of the former; of the latter, 2219 above 70 years of age. An increased mortality may also be remarked on inspecting, in the last Table, the articles of consumption and asthma, dropsy, water in the head, small-pox, measles, pleurisy, external inflammation, and mortification. Hence it will appear that extremes of heat are not, in this climate, less detrimental, even in pulmonic diseases, than an extreme degree of cold. How much a moderate and uniform temperature contributes to lessen the annual mortality among us, may be seen from Dr. Fothergill's Account of the Weather and Diseases in 1751, 1752, 1753, and from the annual Bills for the same, compared with those of the years immediately preceding or succeeding.

On farther comparing the London Bills of Mortality, at the middle and close of the seventeenth century, with those of the eighteenth century, it will appear:

"First,

" First, That continued and intermittent fevers were much more fatal, in proportion to other complaints, formerly, than at present.

" Secondly, That the dysentery, and other disorders of the bowels, were, 150 years ago, attended with a greater degree of fatality than we now experience.

" Thirdly, That the deaths from convulsions must be referred chiefly to infants; chrisoms and infants having been gradually resolved into the article of convulsions.

" Fourthly, That croup is an article but of very modern date.

" Fifthly, That the articles of cough, consumption, and asthma, or hydrothorax (termed stoppage in the stomach,) have at all times predominated.

" Lastly, it will appear, although the population of London must be supposed increasing, that the annual mortality has, in 50 years, been greatly diminished. This may be referred partly to the numerous improvements made in the city, which have contributed to preserve the health of its inhabitants: but partly I trust to the more accurate application and greater certainty of the medical art in the treatment of diseases, by attaining which our profession has been rendered more extensively beneficial to mankind."

Subjoined to the whole we find Abstracts of the Bills of Mortality from 1650 to 1656; from 1696 to 1700; from 1746 to 1752; from 1795 to 1800: and, lastly, a Diary of the Weather for the years 1796, 1797, 1798, and 1799, taken from the Philosophical Transactions.

It cannot be denied, that the present classical performance affords a satisfactory proof of the author's attention and industry: but those who endeavour to be accurate are sometimes liable to become tediously minute; and this, we fear, is the case with Dr. W. in at least a few instances. He has entered too much into the detail of the symptoms of some diseases that are generally known, and have been accurately described. After referring to Dr. Quin's treatise on the Hydrocephalus acutus, it was surely quite unnecessary to give a description of that complaint; nor do we see the use of multiplying histories of such common complaints as the scarlatina anginosa, peripneumonia notha, &c. Are not the angina herpetica, (as our author terms it,) and the angina aphthosa, modifications of the scarlatina anginosa, a complaint that is subject to wonderful variations, and in which the anginous affection often takes place without the peculiar cutaneous affection? But little advantage accrues to the science or practice of physic from establishing

establishing, with extreme nicety, the new names and new species of diseases.

In the course of his observations, it evidently appears, that Dr. Willan has bestowed particular pains on the disorders of children, and on those of the skin. It would have saved much repetition and many pages, if, in republishing his Reports, he had thrown the several monthly-catalogues of diseases into one annual table, after the manner adopted by his colleague Dr. Murray, in the 25th Number of our Review.

ART. IV. *Descriptio Arteriarum Corporis humani in Tabulas redacta; quam antea Dissertationum Forma exhibuit, jam vero emendatam sistit* ADOLPHUS MURRAY, M. D. Anat. et Chir. Profess. R. et O. Upsal. Quarto. 120 pages. 1798. Imported by GEISWEILER. Price 3*s.* 6*d.*

PROFESSOR Murray has here presented us with an accurate, perspicuous, and comprehensive view of the arterial system, traced through all its ramifications, from the aorta to the extreme parts of the body. This excellent compendium has afforded much assistance to our latest and best writers on the distribution of the blood-vessels, but has certainly not been equalled by any similar work in the English language. A correct translation, accompanied with engravings, and published at a moderate price, would be a valuable acquisition to students in anatomy. Although its tabular form renders it impracticable to give an analysis of its contents, we shall lay before our readers a short specimen of the manner in which Dr. Murray has treated his subject.

"FEMORALIS PROFUNDA,

"Cujus exitus, tum per alteram superficialem, tum per copiosum adipem et glandulas undique absconditur, in cavo profundo triangulari, inter iliacum, pectineum et adductores inveniundo, supra iliaci et psoæ communem carnem cum flexione quadam, extrorsum convexa, retrorsum et deorsum ad vasti interni superiorem finem dirigitur. Tum vero, dum arteria fundum cavi hujus est emensa, et leni flexione antrorsum iterum ducta fuit, spatium illud, quod inter adductorem brevem et longum vastumque internum in femore invenitur, deorsum et retrorsum ad mediam fere ossis longitudinem percurrit. Demum, intervalla, vel inter adductorem brevem

et adductorem longum, vel in ipso hoc musculo præparata transfodiendo, adductorem magnum offendit, et per illum variis ramis inter posteriores femoris musculos erumpit. Sed directio tamen prima trunci et magnitudo variat; prout citius tardiusve a femorali communi sit dejectus, et copiosiores atque insigniores largiatur ramos. Horum aliqui minoris sunt momenti, quatuor autem ex sequentibus dignissimi memoratu:

" I. Rami minores plures, sæpe qua partem plane deficientes, et vel seorsim exeuntes, vel communem trunculum formantes; iliacum internum, capsulam, cutem, sartorium, vastum externum et internum, tricipitisque capita variis locis petentes, et in ipsis musculis cum circumflexæ internæ et externæ arteriolis, quas offendunt, communicantes. Pudendas quasdam externas interdum genuisse observatum est.

" II. *Circumflexa externa*, prima sæpe, ubi ex trunco communi processit, et insignis arteria, nonnumquam vero a femorali superficiali decedens. Inter iliacum internum, rectum anteriorem et sartorium, atque porro inter tensorem fasciæ latæ et glutei medii anteriorem carnem extrorsum conflexa, vasti externi tendineam superiorem in femore originem transversim subrepit demumque prope radicem trochanteris majoris evanescit. Hoc sub cursu arteriæ, quam maxime sese dividentis, eduntur:

" 1. Ramus iliaco interno immersus et in ejus carne ad pelvis cavum relabens:

" 2. Ramus alius, sub iliaco ad internum femoris latus projectus, et prope trochanterem minorem cum quodam circumflexa internæ surculo communicans:

" 3. *Ramus transversus magnus*, qui trunci constituit superiorem a vasto occultandam partem et vix exorsus, gignit:

" α. Ramos ad iliacum, tensorem fasciæ latæ, ut et sartorii rectique superius extremum;

" β. Ramos plures, ex anteriore facie trunculi enatos, extrorsum et sursum inclinantes, mox multifidos, in tensore fasciæ latæ, gluteo medio, et interdum magni glutei anteriore inferiore portione desinentes;

" γ. Ramum inter iliacum et gluteum minimum extrorsum proserpentem, et in externa pelvis facie exspatiantem, ubi art. profundissimæ ilei jungitur;

" δ. *Trochantericam anteriorem*, subtiliorem ramum, inter iliacum internum et vasti externi anteriorem oram, sub gluteo medio et minimo, in trochanteris majoris anteriore facie, adipe copioso occultata, ad fossam trochantericam evehendam, et, ramis ad enumeratos musculos, ossa capsulamque exhibitis,

cum

cum trochanterica posteriore in fossa ejusdem nominis conjungendam. Interdum minima est.

" ε. *Ramos transversos* binos tresve insigniores, trunculum ipsum consumentes, vasto externo obtectos, circum trochanteris radicem ad posteriora flexos, et in glutei magni tendine, vel etiam, trajecto prius illo, prope os cum perforantis primæ ramo transverso, atque posterioris trochantericæ ramo descendente copulatos. Ex his

† Rami ad cruralem et vastum externum :

†† Rami nutritii minuti ad trochanteris superficiem et os femoris :

††† Rami subcutanei, circulum ad radicem trochanteris majoris describentes.

" 4. *Ramus descendens major*, ex trunco, ubi in ramum transversum magnum, jam descriptum, abit, eductus, et sub recto ad vasti oram anteriorem deflexus. Sub decursu ad patellam a vasti externi ora prope cruralem obvelatur, et ramis suis priori, non vero alteri adhæret ; demum vero, paullo supra genu in vicinia patellæ ad superficiem musculi adeo elevatur, ut ejus cum arteria articulari externa ultima conjunctio sæpe transluceat. Porrigit :

" α. *Ramum magnum ad rectum*, multifidis surculis recti anterioris aversæ superficiei immersum, et in carne musculi perlonge descendentem ; duplici sæpe arteria cum ramo anastomotico femoralis superficialis, surculum per vastum internum ad recti inferiorem finem propellente, communicantem :

" β. *Ramos transversos*, incerti numeri, 3 ad 6, et variæ originis atque extensionis, ab externo latere trunculi descendentis in ipsa carne vasti passim obortos, retrorsum in carne hujus ad posteriora procedentes. Ex his superior cum ramis transversis perforantis primæ, inferiores autem cum ramo exteriore transverso perforantis secundæ cumque perforante inferiore superficialis coëunt.

" *Obs.* Præter trunci ipsius anastomosin cum articulari superiore externa supradictam, aliam hic cum articulari superiore interna atque ramo anastomotico eo modo init, quod ramulum quemdam inter cruralem et rectum prope patellam ad internum femoris latus deducat. Magnitudo arteriæ valde variat.

" 5. *Ramus descendens minor*, interdum a superficiali, interdum a ramo transverso magno, circumflexæ exortus, sub recto ad sartorium et vastum internum ramulos primum emittens ; tumque cito in vasti interni carne, a qua recipitur, introrsum sese flectens ; et demum sub tricipitis tendine cum perforante

inferiore arteriæ femoralis superficialis, vel etiam, quod frequentius fit, cum ramo anastomotico magno sese jungens. Alias extrorsum ad cruralem vastumque externum duci observavi."

ART. V. *Memoir on the Analysis of the Black-vomit, ejected in the last Stage of the Yellow Fever.* By ISAAC CATHRALL. Octavo. 32 pages. FOLWELL, Philadelphia. 1800.

OFTEN has it been our lot to remark, that there is no assignable proportion between the length or size of a publication, and its merit or value. Readers of books have long lamented, that a large amount of the time and toil they bestowed in examining the publications of their day, was expended without either instruction or entertainment. Doleful is the task of the reviewer who is to give an account of long and tedious works, and to glean, from an almost immeasurable surface of leaves and pages, the few particles of sense and beauty which are scattered over them. Amplification and prolixity are the common faults of writers; and it is a great pity, both for them and their readers, that these are so prevalent. Fortunately, however, it happens, that they who offer their compositions to the public, do not always fill a folio or a quarto with that which might be comprehended in a pamphlet of moderate size. In several departments of learning, there are short works which have secured extensive and lasting fame to their authors. The celebrated treatises of Longinus on the Sublime, of Horace on the Art of Poetry, and of Tacitus on the Manners of the Germans, are none of them remarkable for their length. Littleton's luminous tract on Tenures, the oracular book of English lawyers, runs out a little way in print. The admirable Theory of Matter, proposed by Boscovich, is contained in a volume of small bulk. In short, two of the most valuable physiological essays, to wit, the one on the Concoction of Food in the Stomach, by Stevens, and the other, on the Respiration of Animals, by Goodwyn, comprise their important experimental matter within a very moderate compass.

To this class of concise, but pointed and sententious productions, belongs the Memoir which now lies before us. Without any preface or circumlocution, Dr. Cathrall proceeds directly to his subject. To this he has attended patiently and perseveringly.

perseveringly. That the piece may be rightly appreciated, it is proper to observe, that the author began his observations during the raging of the fatal sickness at Philadelphia, in 1793, and offered to the Philosophical Society of that city, in the month of June 1800, this result of his seven years investigation: and that many of the experiments were witnessed by Drs. Samuel Duffield and Adam Seybert. The black-vomit is described thus:

"The black matter, or vomit, so called, appears to be of two kinds: one consisting of a number of black flaky particles, resembling the grounds of coffee; the other of a dark-coloured inspissated mucus. Of each of these I shall give a separate description.

"This flaky discharge was always preceded by violent sickness and vomiting; and, as a precursor to the ejection of this matter, in some cases, the patients vomited a fluid like whey or muddy water, or one consisting of a brown flaky substance, resembling chocolate or spoiled porter, mixed with brownish-coloured mucus. These substances were sometimes of a lighter colour, and were suspended in a glarey yellow-coloured fluid, which became nearly transparent when at rest, by the subsiding of a small number of brown particles. This coloured matter was generally vomited in small quantities, and with considerable difficulty; but when the black flaky discharge commenced, it was frequently ejected in large quantities, and with similar force to a fluid from the action of an emetic. As the disease advances, this matter assumes a darker colour, and its quantity sometimes becomes so much augmented, that I have known one gallon vomited in forty-eight hours, besides a considerable quantity, which was of a much thicker consistence, that was discharged by the bowels. This black-vomit, after standing some hours, deposits a black flaky substance, from a glarey yellow-coloured fluid, similar, in appearance, to an infusion of green tea. These depositions were sometimes in distinct particles, but frequently in a kind of dark powder. The above particles were various in size, and of a very irregular figure, not unfrequently mixed with pieces of the villous coat of the stomach. These may be distinguished by their being longer in subsiding to the bottom of the vessel than the flaky substance. There were some disproportions between the yellow-coloured fluid and the quantity of flaky substance, as in the other appearance of the vomit. The flaky matter was very readily incorporated with the yellow-coloured fluid, by the least agitation of the vessel; and when kept in a phial,

corked for eight or ten days, assumed rather an agreeable saccharine odour, and was extremely brisk, like fermenting beer. This last property is not peculiar to this fluid, but common to some other animal secretions. When the black-vomit was kept for two years in a state of rest, the flaky particles became perfectly separated. On agitating the vessel, the former was immediately incorporated with the latter; and, after remaining at rest six months, shewed scarce any disposition to separate.

"The mucous matter, which was sometimes vomited in the yellow fever, and particularly in that which appeared in 1797, was very ropy, and of a black colour. This matter floated on a fluid of a dark colour, which appeared to receive its tinge from the colouring matter of the mucus. When this matter was agitated in a phial, the mucus shewed no disposition to mix with the fluid part of the vomit, and when it was repeatedly washed in clear water, became nearly of the colour of the mucus secreted in the alimentary canal. This black matter was discharged, in large quantities, in the cases which proved mortal in 1797, and was a very inactive fluid when applied to the most sensible parts of the healthy body, and was essentially different from the coffee-ground vomit."

From various and repeated experiments, Dr. Cathrall concludes that the black-vomit, besides a considerable proportion of water, tinctured with resinous and mucilaginous substances, contains a predominant acid, which is neither the carbonic, phosphoric, nor sulphuric. This acidity he found to be present in the yellow-coloured fluid, taken from twenty different patients, during several seasons of the prevailing yellow fever, and also in the black flaky substance. With these were combined muriate of soda, iron, and an unctuous animal substance, somewhat resembling spermaceti. The exact proportion of the different substances he had not an opportunity of investigating, for want of a sufficient quantity of the black flaky matter to make a complete analysis. An acid, which he believes to be of the same quality, is contained in the fluids ejected from the stomach a few hours before the commencement of black vomiting. Of this acid the author has expressed himself in negative rather than positive terms, faintly hinting, however, that it may be the muriatic.

On the effects which the matter of black-vomit produces on the living system, Dr. C.'s experiments are so original, and his conclusions so remarkable, that we shall insert the section at full length:

"From

"From the internal surface of the stomach and intestinal canal appearing, on dissection, inflamed and sphacelated, particularly in some patients who had vomited black, it has been believed that the black-vomit was corrosive, and had a power of acting on parts it came in contact with. This power has likewise been inferred from some patients complaining of a soreness in their throats, immediately after the ejection of this black matter.

"To determine how far it was capable of acting on the healthy body, it was submitted to the following experiments:

"1st. In October 1794, immediately after a quantity of black-vomit was taken out of the stomach, after death, I applied some of it to my tongue and lips: to the latter it gave, a short time after application, the sensation of a fluid perceptibly acrid. This experiment was, the next day, several times repeated, with the same result.

"2d. A friend of mine applied it to his lips, and it produced a similar sensation, but would not affect his tongue.

"3d. Finding the effects of this matter so different from what was expected, I began to believe that this discharge varied materially, in point of activity, in different patients; but on subjecting the black-vomit, procured from a number of persons, to the same test, it produced the same effect.

"4th. Two ounces of a fluid, resembling chocolate, was obtained, which was vomited a few hours before death. This was applied in the same manner; but there could not be perceived any difference in the result.

"5th. In the beginning of October 1799, Mr. Joseph Parker, an active and intrepid member of the Board of Health, obligingly presented me with five ounces of black-vomit, obtained from the physicians of the City Hospital. Some of this I applied to my tongue, in his presence, but could not perceive the least corrosive effect. When this fluid was applied to the skin, on different parts of the body, it produced no other effect than what water did of the same temperature. I have often immersed my hand in black-vomit, immediately after it was discharged from the stomach, and whilst it was warm, without exciting the least uneasy sensation in the skin.

"*(a)* October 4th, 1799, three cats were confined in a room, and fed with beef, which had a considerable quantity of the flaky substance of the vomit inserted into it. This manner of feeding was continued until they had ate [*eaten*] one drachm and half of the flaky substance, and had drunk several ounces of the black-vomit. On the 5th, the excretions by the bowels were

were of a dark colour; yet there could not be discovered any difference in their health; but, from their being strangers to each other, they had a constant propensity to combat. This malicious spirit continued until the 20th, when they were dismissed in good health.

"*(b)* A large dog was confined in a room, and, by an assistant, his jaws were forced asunder, and he was compelled to swallow an half-pint of black-vomit. The following day the excretions by the bowels were fluid, and of a black colour; but there could not be observed the least alteration in his health, from the time of making the experiment until he was dismissed, which was about three weeks after.

"*(c)* Two full-grown fowls were confined, and fed with bread, steeped in black-vomit, for twelve days. This, Mr. Parker, as well as myself, observed, they ate with great avidity; but it had no evident bad effect upon their health; for they continued as well after as they were before the experiment, and seemed to give the preference to that kind of food to every other which was presented to them, and they appeared to thrive equally well as if they had been fed upon corn.

"*(d)* On the 3d of October 1799, in a small yard, adjoining the house in which I live, several ounces of the black-vomit, recently obtained, was [*were*] evaporated over a moderate heat, in order to obtain the flaky substance. During this experiment, Mr. Parker held his head over the vessel for some minutes, so as to inhale the steam of black-vomit; after which we continued within two yards of the vessel, without experiencing any unpleasant effect.

"*(e)* The following day I caused the windows and doors of a room to be closed, and the same experiment was repeated on a sand-bath, constructed in the middle of a room. The fluid was evaporated until the atmosphere was so impregnated with the effluvia of the vomit as to render the apartment extremely unpleasant, not only from the odour of the vomit, but the warmth of the room. In this atmosphere I remained one hour, during which I had a constant propensity to cough, and had, at times, nausea and inclination to vomit; but, after walking out in the air, these effects gradually subsided. I experienced, however, a sense of weariness at my chest for many hours after.

"From the above experiments, it appears that the black-vomit, when applied to the most sensible parts of the body, produced little or no effect.

"Secondly.

"Secondly. It appears that large quantities of this fluid may pass through the stomach and bowels of quadrupeds and other animals, without apparently disturbing digestion, or affecting their health. This fact incontestably proves the inactivity of this fluid, and renders it probable, that the speedy death which ensues, after this discharge in yellow fever, is not from the destructive effects of this matter on the stomach and bowels, but, most likely, from the great degree of direct or indirect debility which had been previously induced, on which the black-vomit is sometimes an attendant, and strongly expresses the great danger to be apprehended from the enervated state of the system.

"Lastly. The experiments *(d)* and *(e)* tend, in some measure, to prove, that an atmosphere, highly impregnated with the odour of black-vomit, recently obtained, would not produce fever, apparently under the most favourable circumstances."

Dr. C. next examines the opinions of authors concerning the black-vomit. These he classes under four heads: 1. That which considers it as consisting of putrid bile: 2. As composed of a mixture of blood and bile: 3. Of the villous coat of the stomach dissolved in the progress of inflammation, terminating in sphacelus: and, 4. Of bile mingled with the *nitric* (we suppose he means *septic)* acid contained in the alimentary canal. All these are considered and dismissed as inadequate or erroneous, and are succeeded by the author's own opinion, that black-vomit is *an altered secretion from the liver*. Dr. C. grounds this conviction on the following considerations:

"The colouring matter of the vomit appears, from the authors already quoted, to be generally traced, after death, to the gall-bladder. This position being incontrovertibly established by dissections, the power of the liver to secrete that substance will be admitted, of course, as it could not be secreted by the gall-bladder, or transmitted into that viscus through any other passage, but by the hepatic duct. If this view of the subject be, in any measure, just, it is a fact, ascertained beyond the shadow of a doubt, that the black flaky substance of the vomit is an altered secretion from the liver. This matter, being secreted by the liver, and deposited by the hepatic duct in the gall-bladder, in the last hours of this disease, is from thence forced, by the contractions of the gall-bladder and cystic duct, in conjunction with the violent action of vomiting, into the stomach. It there receives the addition

of the yellow-coloured fluid, which is almost always ejected with the flaky substance. That this fluid is combined with the flaky matter in the stomach, and not in the gall-bladder, every inquiry into the appearances after death fully confirms. This circumstance renders the yellow-coloured fluid subject to some difference in its properties, according to the nature of the fluids received into the stomach a short time before vomiting; but all that I have had an opportunity of examining, have nearly the appearance we have already described. That the secretory economy of the liver may be so far arrested in its healthy action, by the progress of disease, as to assimilate a fluid having not the least analogy to bile, every work on morbid dissections certainly prove [*proves*]. Lieutaud mentions a case from Rivalerius, in consequence of a diseased liver, where the fluid in the gall-bladder resembled milk; and Storke relates a case of a dropsy succeeding an intermitting fever, where the fluid in the gall-bladder resembled the white of an egg. To these I may add one that came under my own observation, of a gentleman who died dropsical, in consequence of an enlarged liver. The gall-bladder contained a fluid, of a dark colour, having not the least resemblance to bile. These, and many more cases, could be adduced to prove the power of the liver, under certain circumstances, to secrete a fluid dissimilar to bile; but it would be needless to recite them, as the instances already quoted are, no doubt, sufficient to establish the fact. This peculiar condition of the secretory vessels, in the yellow fever, is not confined solely to the liver; for we find that other secretory functions are sometimes affected in a similar manner, during the same disease, and nearly at the same period of time. In confirmation of these observations, I believe most physicians must have remarked, that, in some cases, the kidneys, during the period of black-vomiting, secrete a fluid of a dark colour, which has a thick pellicle on its surface, and appears almost as different from urine as the black-vomit does from bile. This discharge is generally a precursor to a symptom which never fails to predict a speedy dissolution, viz. a paralysis of the secretory functions of the kidneys.

"The more I consider the material change produced in the different secreting vessels, during the last stage of this disease, the more this theory appears to be supported by reason and the plausibility of truth. But, though a morbid condition of the glandular economy of the liver may produce the coffee-ground coloured vomit, it does not seem probable that the black

black inspissated mucous matter which was ejected in the cases that proved mortal in 1797, is derived for the same source; for the liver, under no condition of diseased action that we are acquainted with, is capable of secreting mucus of such an appearance; therefore, we think it most reasonable to refer it to the surfaces, which are destined, in a state of health, to secrete mucus. Now, admitting the axiom, 'that 'similar causes produce similar effects, under similar circum-'stances,' why may not the glandular structure of the stomach be affected in a similar manner to that of the liver and kidneys, so as to enable it to secrete the mucous matter above mentioned? This opinion, I think, may be affirmed by other analogies, not only in the sthenic, but in the asthenic condition of secreting surfaces, in which there are [*is*] equally as great a deviation from healthy secretion as the one alluded to. This we have clearly exemplified in vessels destined to secrete mucus in a state of health; but, when labouring under inflammation, evidently secrete pus."

The observations with which we shall conclude our review of this excellent piece will not be very long. First: It appears clearly that the black-vomit is not the cause of yellow fever, but merely a symptom, or rather an effect, of the poison originally applied. It is possible, that not a drop or particle of the septic virus itself, which induced the disease, is present in the primæ viæ when black-vomiting begins. It may have been wholly ejected by previous vomitive efforts, and the irritation of inflammation, caused by its presence, still remain to torture or to kill the sufferer. This may be understood by comparison with another poison; arsenic, for instance. If the oxyd of arsenic should be swallowed, it is possible for every atom of it to be expelled by vomiting; but, even then, the injury done by it to the stomach would remain, and a dangerous gastritis, followed by black-vomiting, might destroy life. And neither in this case of *arsenical fever*, nor in the *septic* or *yellow fever*, would the matter vomited in the latter stages of the disease necessarily contain any oxyd of the metal, or acid of putrefaction. Secondly: The black-vomit, as has been shown by Dr. Miller, in his cursory observations on yellow fever, published in Med. Rep. vol. ii. p. 412, is by no means a *pathognomonic* sign of that disease. So far is it from being the case, that this awful symptom frequently follows the swallowing of the oxyd of arsenic, muriate of quicksilver, and the acetate of copper. It is also a frequent con-

sequence of the fatal operation of vegetable poisons taken into the stomach. They, therefore, who have considered it as a *diagnostic* of the yellow fever, have judged erroneously, and drawn their conclusions from very partial and limited premises: for, instead of being confined to this distemper, it is now well known to attend or follow the severe and deadly operation of most poisons upon the organ of digestion. Thirdly: Though we are inclined to think, with the author, that former writers have given but conjectural and imperfect accounts of this dark-coloured fluid, and that he has reasoned ably on the subject, yet we shall offer a few ideas on the function of the liver in these cases. This conglomerate gland, during the time of health, prepares a *bitter* and *alkaline* liquid in considerable quantity. The use or operation of this, as far as we can interpret final causes, is to quell and neutralize acids of all kinds in the chyle or alimentary mass, as it passes through the intestinal canal. And a wise and happy provision it is of the Creator, that the animal economy is furnished with an ample store of such an antiseptic and antipestilential liquid. But the secretory process of the liver, as well as of the other glands of the body, is sometimes impaired. Those violent poisons, which paralyze the lachrymal gland, dry up the tears, benumb the salivary glands, prevent the formation of spittle, torpify the kidneys and diminish the quantity of urine, and, affecting the cutaneous vessels with spasm, check the insensible perspiration, seem also to interrupt the bile-producing function. The supplies of wholesome fluid, which the liver was accustomed to prepare, are withheld, and the intestines, at length, contain the common ingesta and excreta, with all their proneness to become sour and to irritate, without the soothing and controlling influence of the gall. The predominant acidity, in Dr. C.'s experiments, may thus be accounted for, and, at the same time, serve to render it yet doubtful whether the matter of black-vomit proceeds from the liver. We have no proof that the liver secretes an acid liquor. During the prevalence of that symptom, we are inclined to believe the sickly liver prepares too little bile for the wants of the constitution, and this little may be altered so in its quality as, on meeting with the acidity of the stomach and duodenum, to exhibit a dark colour, in a manner not materially different from that quoted (p. 24) as Professor Mitchill's.

[*Med. Rep.* Vol. IV. p. 163.

ART.

ART. VI. *Ueber die Pulsadergeschwülste, und ihre chirurgische Behandlung*; i. e. *On Aneurisms, and the chirurgical Treatment of them.* By Dr. A. F. AYRER, Göttingen. Duodecimo. 1800. Imported by GEISWEILER.

THE author's design, in this publication, is to bring under one view the scattered facts and observations of the most eminent chirurgical writers on the subject of aneurism, accompanying them with such remarks of his own, as have been suggested to him by the cases which he saw in the large hospitals of France and Italy. The design is certainly good; and this little book will be of considerable utility to young surgeons.

In his Introduction, the author takes notice of the injury which the bones sustain from aneurisms. This circumstance has been noticed by several writers (cited by Dr. Ayrer) anterior to the late Dr. Hunter, who has attempted an explanation. Independently of the concurrence of the venereal and scrofulous virus, our author is inclined to consider the constant attrition from the pulsation of the aneurism (like the gradual action of water perpetually dropping upon a stone) as the immediate cause of this phenomenon.

After treating of aneurism (true and false) in general, the author proceeds to consider the different species (Chap. I.—X.) and afterwards to treat of the causes of aneurism (Chap. XI.) and the prognosis (Chap. XII.) Then follows a description of the principal arteries most liable to aneurism, such as the temporal, carotid, subclavian, femoral, &c. occupying Chapters XIII. XIV. XV. XVI. The XVIIth Chapter treats of the cure of aneurism in general; and one particular remedy, *i. e.* compression, occupies the four following chapters, and part of the fifth, viz. XVIII. XIX. XX. XXI. and XXII. The treatment of each particular aneurism of the arteries before described is discussed in the seven succeeding chapters (XXIII. XXIV. XXV. XXVI. XXVII. XXVIII. XXIX.) In the XXXth Chapter are considered the advantages and disadvantages of the operation for the aneurism, in which the arterial sack is opened; in the XXXIst Chapter, the advantages and disadvantages of the modes of operation practised by Anel, Hunter, and Guillemeau; in the XXXIId Chapter, the advantages of Anel's and Hunter's mode of operating; in the XXXIIId Chapter, the advantages and disadvantages of Brasdor's mode of operation; in the XXXIVth Chapter, the inutility of

styptic * remedies in aneurisms; XXXVth Chapter, the cases in general, where the operation for the aneurism is necessary; XXXVIth Chapter, the cases in general where the operation ought not to be performed; XXXVIIth Chapter, the cases in which Anel's and Hunter's mode of operation is applicable; XXXVIIIth Chapter, the cure of aneurisms of the radial, cubital (or ulnar,) and interosseous arteries; XXXIXth Chapter, the cure of true and false aneurisms of the arteries of the lower extremities. The XLth and last Chapter treats of amputation, as a necessary measure in some cases of aneurisms of the extremities.

From this table of contents our readers will perceive, that the author has taken a very comprehensive view of his subject; and, as far as we have examined, he has shewn himself fully competent to the task he has engaged in. It is our intention to lay before our readers extracts from some parts of this performance in some of our future Numbers.

In the course of his observations the author makes frequent reference to the works of Hildanus, Bartholine, Lancisi (de Motu Cordis et Aneurismat.) Van Horne (de Aneurismatibus,) Ruysch, Hunter, Monro, Murray, Richter, Bell, Dessault, Lassus, Sabatier, Lauth (Collectio Scriptor. de Aneurism. Argentor. 1785,) and Deschamps (sur la Ligature des principales Artéres. Paris. 1793.)

The work is accompanied by an engraving to illustrate the mode of applying compression.

ART. VII. *An Introduction to a Course of Lectures on the Operations of Surgery.* By THOMAS CHEVALIER, A. M. Fellow of the Linnæan Society. Octavo. 58 pages. BAGSTER, London. 1801. Price 2*s*.

WE have perused this little work with no small satisfaction, and are persuaded that its contents will be found both useful and interesting to chirurgical students. It has been too often the fashion amongst young surgeons to bestow their chief pains upon the more brilliant part of their profession,—the dexterous performance of manual operations; which, however, is neither the most difficult, nor (to the bulk of practitioners) the most valuable part of their acquirements. Much

* The author's term is "escharotic remedies."

is

is requisite to be learnt, and to be done, besides the mechanical art; although this, without doubt, is a very desirable and indispensable qualification. The author, we are happy to find, has endeavoured to fix the young surgeon's attention on the other important duties of his profession, which indeed are of greater extent than many superficial observers have been willing to suppose.

"There is a degree of splendour and consequence usually attached to the performance of the greater operations, which powerfully excites the curiosity, and interests the feelings of younger minds; so that students are not unfrequently induced to go about from place to place to see these great sights, which so much amuse them, and fill them with a vain conceit of their own attainments, to the hurt of their most important and necessary studies, and to the neglect of those very things in which the future exercise of their profession must chiefly consist."

Mr. Chevalier goes on to observe, that "to investigate the nature of those diseases in which operations are needful, and to distinguish them from those which are conquerable by more gentle means; to ascertain the moment when the knife should be employed, and to determine under what circumstances, and with what medical treatment, it may be used to the greatest advantage; to know precisely in what the operation itself should consist, what should be attempted before it, and what ought to follow after—this is the surgeon's longest, and his hardest task."

In order to assist young students in the acquisition of such knowledge as is here recommended, Mr. C. points out what ought to be the leading objects of a surgeon's profession; first, with regard to his own personal endowments; and secondly, respecting the attention due to his patients. We shall lay before our readers a specimen of the able and pleasing manner in which these topics are handled.

"A liberal, and, if possible, a classical education, is highly desirable for a surgeon. No man knows his own profession thoroughly, who knows nothing else. The mind is enlarged, and fitted for the fuller comprehension and more perfect combination of ideas, in any one science, by having gained an insight into others. Indeed, the more a youth in early life has attained of that information which suited his years, the more vigorously, generally speaking, and the more successfully, will he afterwards apply his talents to any single pursuit to which he may attach himself.—In the study of surgery

surgery a knowledge of chemistry, and of natural philosophy in general, will be found highly useful; and especially a knowledge of mechanics. This is a branch of science, from a good degree of acquaintance with which, much assistance is frequently to be derived, and much adroitness acquired, in the relief of many accidents and diseases to which a surgeon may be called. Optics likewise should be studied with care, that the structure, use, and diseases of the different parts of the eye, may be thoroughly comprehended, and proper modes of relieving them ascertained.

"I would not however be thought, for a moment, to encourage a roving and unsettled turn of mind, which should make amusement a very prime object. Nothing can be more destructive to the usefulness and advantage of a surgeon. He should indeed endeavour so far to obtain an acquaintance with science at large, that he may derive from it all the light it can throw on any part of his profession, that he may associate with comfort and respect among scientific men, and that he may be able to ensure a certain degree of confidence and respect from his patients; such of them, at least, whose respect is worth having. But after all, his business must be his business. No collateral attainments will compensate for deficiency in that. However men may be prepossessed in favour of a surgeon from the brilliancy of his conversation, or the sprightliness of his wit, they will at last judge of him, and will also speak of him, according to the discernment he discovers in the treatment of their complaints.

"From these observations I think it will appear, that the first qualification a surgeon should aim to possess, is a knowledge of those diseases which it is his province to remedy: and in order to this, in addition to what I have already mentioned, the following things are principally necessary—A knowledge of human anatomy—Sufficient opportunities of seeing the diseases themselves—An habit of accurate observation—And careful reasoning on the facts which come before him."

After making some judicious and appropriate remarks on these several points, the intelligent author proceeds to the consideration of what is necessary to be known by the surgeon respecting his patients: he observes, that "the state or condition of the patient is a matter of great importance, especially in those operations which are rendered necessary by previous disease, and are not suddenly required by serious accidents. It is proper especially to attend to his age, constitution, and to the present state of his general health: whether he

he be strong, or debilitated, irritable and low; whether he appear fully equal to the operation, or whether there be any probability of his dying sooner in consequence of it.

"With regard to the disease itself, not only its nature is to be taken into the account, but also its particular situation; the length of time it has continued, and whether it be simple, or accompanied with any peculiar circumstances, which render a difference in the operation, or in the treatment, necessary.

"Why the operation should be performed, is another consideration. Is it absolutely necessary? Is any risk incurred by it? and if there be, is the advantage expected fully equal to that risk, and is the probability of success sufficient to justify the exposure to it?

"In what is the operation itself to consist, and in what manner may it be most advantageously executed? By what instruments? With what dressing and bandage? Is any preparation by medicine needful? What attendants will be required to do all that is to be done, without confusion and embarrassment?

"What situation is most proper? On a bed, a table, or a chair? How should the patient and the operator be placed with respect to each other, and with respect to the light? And to what situation should the patient be removed afterward, that he may be kept quiet, and under circumstances the most favourable to success?

"When should the operation be done? Is it necessary immediately, or how long may it be safely delayed; and what advantages are to be gained by delaying it, or what by performing it early?

"Supposing then an operation to be clearly indicated, and the period proper for performing it sufficiently evident, the next thing necessary is to prepare the mind of the patient, and to communicate to him the opinion that is formed on his case, with sufficient delicacy, and yet with firmness."

We are then directed how to manage a patient previous to an operation, supposing it to have been resolved on; after which, when the period for its performance has arrived, "it is proper for the operator himself to see that all his instruments, lint, needles, ligatures, bandages, compresses, &c. are in readiness, and are conveniently arranged, and also that his attendants are properly furnished with sponges, basins, towels, warm and cold water, or whatever else is likely to be wanted, before the patient is placed on the table, or bed, or whatever situation is made choice of for the operation. But he should

nevertheless above all things guard against all unnecessary fuss, and parade of instruments and preparations; especially in sight of the patient, who naturally enough supposes, if a great deal is to be made ready, a great deal is to be done, and he is of course to suffer it all. Quietness, regularity, and dispatch, are on no occasion more commendable than on this."

The difficulties of ensuring success in the completion of some operations having been hinted at, Mr. Chevalier remarks that the task of a surgeon is not at an end when these are removed; but he is next to consider what symptoms may be expected to result from the operation, and to guard against their excess, by proper remedies, suitable diet, position and management.

The concluding observations are not less just and important than those we have cited. On the whole, then, it is evident, as the author informs his pupils, "that to learn surgery is a serious undertaking, demanding their close and persevering attention."

ART. VIII. *A compendious Medical Dictionary: containing an Explanation of the Terms in Anatomy, Physiology, Surgery, Practice of Physic, Materia Medica, Chemistry, &c. &c.* By ROBERT HOOPER, M. D. Second Edition. Duodecimo. 370 pages. MURRAY and HIGHLEY, London. 1801. Price 7*s*.

WE have already had occasion to commend the first impression of this portable volume. (Lond. Med. Rev. Vol. I. p. 274.) The present edition is considerably enlarged and improved; many useful articles having been supplied, which, we suppose inadvertently, had been left out by Dr. Hooper in his former compilation. Even now, however, we observe some omissions of technical terms, well deserving notice in a medical glossary.

The following Advertisement prefixed to this work, gives us reason to hope for a much more extensive and desirable undertaking than the present:

"Doctor Hooper being engaged, in conjunction with several other Physicians and Surgeons, to compose an ENCYCLOPÆDIA MEDICA, upon a new and extensive plan, solicits the communications of the learned on any subject connected with the practical branches of the profession. It is proposed

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to adjoin the name of each author to his own contribution or article; and it is requested that such communications may be addressed to the Editor of the ENCYCLOPÆDIA MEDICA, at Mess. MURRAY and HIGHLEY'S, N° 32 *Fleet Street.*"

If it be the design of Dr. Hooper and his coadjutors to publish a Dictionary similar to the French *Encyclopédie Méthodique*, which is not yet completed, we have no doubt that it will prove highly acceptable and useful, not only to practitioners in general, but to very many extra-professional and scientific readers.

ART. IX. *Engravings of the Arteries, illustrating the second Volume of the Anatomy of the human Body, by* J. BELL, *Surgeon; and serving as an Introduction to the Surgery of the Arteries.* By CHARLES BELL, Surgeon. Quarto. 49 pages. LONGMAN and REES, London. 1801. Price 1*l.* 1*s.*

THE volume before us contains ten coloured plates, executed by a first-rate artist, with peculiar neatness and delicacy; which, from the simplicity and accuracy of Mr. Bell's designs, must prove a very agreeable companion to anatomical students. These engravings represent the principal arteries in the human body: but especial attention has been paid to those which are exposed to casualties and chirurgical operations, &c.

ART. X. *Krankenbuch, &c.* i. e. *A Book for Valetudinarians.* By Dr. C. A. STRUVE. The Second Volume. Octavo. 514 pages. Breslaw. 1799.

AN account of the former part of this work will be found in the first volume of our Review. We then pointed out the author's views in drawing up this compendium, and enumerated the contents of each section of that volume. In the present volume, the author treats of the various diseases to which the human frame is liable, excepting those that are peculiar to children. On these he has written a separate work, to which he refers. In addition to the description and treatment of diseases, Dr. Struve treats also, in an Appendix, of certain articles of diet and their preparation; of some apparatuses which should always be kept in the house for the use of the sick,—such as the slipper-bath, rollers, lint, oil-cloth,

sponges, &c. a thermometer, scales and weights, a fumigating machine, a clyster apparatus, Mudge's inhaler, and of domestic medicines, &c. [Is not this turning every private house into an apothecary's shop?] The last section of this appendix, in which we think the author has descended too far into minutiæ, exhibits what he terms a blood-letting table, or directions relative to the circumstances in which the lancet should not be used.

We do not conceive it to be necessary to lay before our readers a list of all the diseases of which the author has treated; it will be sufficient if we select, as a specimen of this work, the following observations relative to the treatment of pulmonary consumption.

"The diet should not be stimulating, but yet strengthening and nourishing. In general, the powers of digestion are very feeble in consumptive patients. Spices, strong wines, and malt liquors, aggravate the fever; on the other hand, too sparing a diet (such as weak broths, or mere vegetable food) increases the irritability of the stomach, relaxes it too much, and is insufficient for repairing the daily loss of strength. Animal food, such as poultry, calves lights stewed with sago or rice, game, lobsters, and craw-fish, soup, as well as good broth made from vipers, snails, beef, and veal, agree very well; care, however, should be taken that the fat be scummed off, as that does harm. The diet, however, of consumptive patients should not consist entirely or even chiefly of animal food, but should have a due proportion of vegetable substances. A certain phthisical person lived almost wholly upon meat, without eating any bread or garden-stuff; under this diet, the patient was, it is true, not troubled with the usual uneasiness at the stomach; but the fever was aggravated, and the strength more rapidly exhausted. We lay much stress upon a mild mucilaginous diet, consisting of the substances above specified. Snails, and particularly the limax subrufus, are among the most demulcent and wholesome sorts of food for consumptive people. There are various modes of preparing them, but the following seems as good as any: boil three or four of the large garden-snails (previously taken out of their shells and chopped small) in half a pint of skimmed milk, or an equal quantity of water, until about half of the decoction has evaporated; then strain it through flannel, and add as much sugar as is agreeable. The whole of this, divided into several portions, is to be gradually drunk by the patient every morning. Snails may also be eaten raw. A lady who had considerable fever and cough, and

and had taken a great quantity of medicine without relief, ate every morning, between breakfast and dinner, from four to eight snails, and was thereby perfectly recovered.

"Various vegetables and fruits are proper for consumptive people; in particular it may be mentioned, that the expressed juice of the cucumber and melon is very beneficial, provided the stomach and bowels are not so weak as to be thereby disordered.

"In regard to a milk diet, it is sometimes proper and sometimes not; it is chiefly suited to the first stage of phthisis, but disagrees where the lungs are ulcerated, or the mesenteric glands are obstructed. In fact, milk requires a certain degree of tone and activity in the digestive organs, and a due degree of exercise, which people in the advanced stages of consumption are incapable of taking, in order to nourish and support the body properly. During a milk diet, the patient must abstain from all acids and acescent drinks: should costiveness take place, it must be removed by emollient clysters; on the other hand, if the milk should occasion a diarrhœa, it must be discontinued. The milk is drunk either fresh from the cow or simmered, being diluted while simmering with cold water. Occasionally, medicinal herbs are to be boiled with it. Butter-milk is good against the hectic fever, especially if the bowels are loaded with impurities, and provided there be neither diarrhœa nor too great an exhaustion of strength. The same may be said of whey. The virtues of asses milk in these cases are too well known to need being treated of. Such phthisical patients as cannot bear milk by itself, should have it diluted at first by an equal quantity of common water or Seltzer water, [Our author might have mentioned lime water, which is preferable to common water;] and afterwards it should be diluted with only one part of the aforesaid liquids. Much boiling of the milk renders it less digestible; it should therefore be taken off the fire as soon as it begins to bubble. Where milk fresh from the cow proves too heavy for the stomach, it may be diluted with hot water.

"But of all milk, woman's is by far the best for consumptive persons. Adults will require at least two healthy middle-aged nurses, with good breasts. As the nurses might run some risk of infection from the immediate application of the patients' mouths to the nipples, these should be defended by breast-glasses, or the newly invented false nipples. This mode of cure must not be entered upon too late, and, when entered upon, it must constitute the chief support of the patient.

"Whatever

"Whatever sort of milk diet be prescribed, it should be perservered in for at least six or eight weeks; beginning with half a pint, and gradually increasing in quantity to as much as a quart, daily.

"Rye pottage is another article of diet well suited to the generality of consumptive patients. Boil a proper quantity of rye meal in water to a thick pottage, stirring it carefully, so as to prevent it from being lumpy. Then add a little fresh butter, and as much sugar as is agreeable. Some people add an egg also.

"Raw eggs beaten up with cold water are likewise a proper sort of food in these cases.

"In regard to drinks, all strong heating liquors we have before condemned; but well-fermented malt liquor, of a moderate strength, may be drunk with advantage. One part of such sort of malt liquor boiled for a few minutes with two parts of milk, and taken in a morning upon an empty stomach, is useful in checking the emaciation. [We should apprehend that this posset would occasion a diarrhœa, an effect not very desirable in such cases.]

"The exercise must be proportioned to the strength. Persons actually labouring under phthisis pulmonalis cannot bear strong exercise. Riding on horseback has been recommended in these cases; but it is only serviceable in the incipient stages of this disorder, where there is a weakness of the organs of digestion and a general debility, where the patients have been accustomed to a sedentary life, where the strength has been exhausted by debauchery, or where there has been a diarrhœa of long standing. In actual ulceration of the lungs, riding on horseback only serves to accelerate death. Sea voyages, in consequence of the sickness they occasion, are very beneficial to consumptive persons. The Roman physicians employed this remedy, sending their patients to Egypt, not merely for the benefit of the climate, but for the sake also of the long voyage. Moderate walking is likewise proper. [Our author might have recommended swinging as a substitute for sailing.]

"In regard to the air most proper for consumptive patients, those who can afford it may have their rooms filled with certain factitious gases that have been found serviceable in these cases. A very pure air is not suited to cases of true phthisis pulmonalis; on the contrary, it is often necessary to remove such persons from a dry and elevated situation to a low and moist atmosphere. Hence the beneficial effects of the sea-coast, and particularly of the coast of Egypt, where the air

is

is impregnated with the effluvia from aromatic vegetables and with exhalations from the soil, which are highly salutary to the diseased lungs. Could not this atmosphere be imitated in the apartments of the sick? The worst air is the place where the disease began.—Pessimum enim cœlum, in quo morbus exorsus est. Burser. Just. p. 1. 97.

"Following the plough, so as to inhale the exhalation from fresh turned up earth, is an old and useful practice. Where this cannot be done, fresh clods of earth frequently renewed may be placed in the sick-room. Dr. Hufeland mentions a case in which the exhalation from the fresh earth was productive of the happiest effects.

"Featherbeds, as increasing the perspirations, should be avoided. In the last stage of this disorder the patient must be kept still and quiet, as every exertion tends to exhaust the remaining strength.

"Numberless are the remedies which have been recommended in phthisis pulmonalis. Among the simplest and the best, may be mentioned the lichen islandicus, (where there is no inflammatory condition of the lungs, nor hæmoptysis;) the inhalation of certain balsamic vapours, [We suppose Dr. Struve means æther vapour, variously impregnated;] the earth bath, the cow-house treatment, the tepid bath, and lastly, the inhalation of factitious airs."

The British practitioner will be surprised that our author has made no mention of the digitalis in this list of the best antiphthisical remedies. The experience of the physicians on the continent, with regard to this plant, is, perhaps, as yet confined to its diuretic powers in dropsy.

ART. XI. *The Pharmacopœia of the Royal College of Physicians of London. Translated into English, with Notes, Indexes of new Names, Preparations, &c. &c.* By THOMAS HEALDE, M. D. F. R. S. Lumleyan Lecturer at the College of Physicians, and Senior Physician at the London Hospital. *The Eighth Edition, revised, and adapted to the last improved Edition of the College; with an Index, shewing the general Doses of Medicines,* by JOHN LATHAM, M. D. Fellow of the Royal College of Physicians, Physician to the Magdalen and to St. Bartholomew's Hospital. Octavo. 390 pages. LONGMAN and REES, London. 1801. Price 6*s.*

THE utility of this translation, to a very large body of medical practitioners, will not be questioned. We only think it

necessary to announce the present improved edition, and to express our conviction that it will be acceptable to English readers.

We do not observe that there are any material alterations in this edition.

MEDICAL CORRESPONDENCE.

(Communications for this department will be gratefully received.)

Art. 12. *Case of Aneurism in the Axilla, successfully treated by passing a Ligature round the subclavian Artery.* Communicated to Mr. BLAIR, and by him to the Editors, by THOMAS KEATE, Esq. Surgeon to her Majesty and his Royal Highness the Prince of Wales, Surgeon to Chelsea Hospital, St. George's Hospital, the York Hospital, &c. and Surgeon-general to his Majesty's Forces.

R. KITCHEN, aged 25 years, of the 29th regiment of foot, was wounded on the 2d October 1799, by a musket ball, that fractured three fingers and took off the last joint of the little finger. He arrived at Colchester about three weeks after he was wounded; and about a fortnight after his arrival, three of his fingers were amputated. On the 18th of March 1800, he was sent to the York Hospital, Chelsea; the stumps not healed, the arm tumefied, matter formed near the wrist, which, when let out, did not diminish the tumefaction, but successively occupied several parts of the fore-arm and arm, attended with an incompressible hardness. The pulse could not be felt. At length a circumscribed tumour was observed in the axilla, which at first was barely distinguishable from the surrounding tumefaction: in a fortnight it became more prominent, a strong pulsation was felt, and it now proved to be an aneurism. In a few days the apex of the tumour was so thin, that the stream of blood was distinctly felt to come against the sack per saltum. The pulsation was suddenly lost, the tumour became hard again, but continued to enlarge. In about a fortnight from the time the pulsation was first felt, the tumour burst, some little blood was discharged from the orifice, evidently arterial; but the opening was immediately plugged up by a coagulum. Compresses and bandages were applied, which, with the coagulum, stopped the hemorrhage for two or three days, when it again commenced; an assistant surgeon

geon being in the ward, stopped it by pressing the subclavian artery against the first rib.

In this state I saw it, and, however bad the prospect, I determined upon taking up the artery above the diseased and ruptured part, in its passage over the first rib. Accordingly, I made an incision obliquely downwards, divided the fibres of the pectoral muscle that lay in my way; and, when I came to the artery, passed a curved blunt-pointed silver needle armed double, as I conceived under the artery, and tied two of the ends: though on finding, after a careful examination, that the artery pulsated below the ligature, I determined on passing another ligature higher up, and nearer to the clavicle, but was afraid to suffer the assistant, whose finger was on the subclavian artery above, again to quit his hold upon it, lest he should not be able to resume it; and I then passed the needle deeper, evidently including the artery: after which, I desired the assistant to discontinue the pressure and leave the artery to itself.

Instead of any untoward consequences upon the arm, as might reasonably have been expected, in a few days the swelling of the arm began to subside, the wounds to suppurate, and the ligatures, after the usual time, to separate and come away with the dressings.

The arm has since resumed its feeling, and has recovered, in a great degree, the motion of the elbow and shoulder; that of the wrist having been lost long before the operation.

Arlington Street, T. KEATE.
April 20, 1801.

Art. 13. *On the Cow-pock Inoculation at Vienna, Hanover, and Berlin;* from HUFELAND's Journal.

THE inoculation for the cow-pox in Germany was at first instituted in these three towns. Dr. Careno of Vienna, who translated Dr. Jenner's treatise on the variolæ vaccinæ, relates the following case in the Preface to his work: Four children were inoculated with cow-pox matter, one of whom was 14 months old, the second 1 year and 11 months, the third 3 years, and the fourth 18 months. The two first children were inoculated by an incision made in the arm, in which was put a piece of cotton previously dipped in the matter of cow-pox, and afterwards a plaster was applied upon the incised part. The second day after the inoculation, not a single

symptom of the disease was observed. On the fourth, the two children were a little unwell. The fifth, some very small pustules were to be seen on the face; the incised part became red and much swelled; these symptoms were succeeded by a fever: they continued in this state till the tenth. On this day a little redness was perceptible on one of the inoculated arms, in both the children; but on the other arm a swelling, which was of a longitudinal form, and somewhat hard and filled with pus. The fever and the cough continued till the twelfth. The thirteenth, the fever still continued through the whole night. The fourteenth, the fever abated. Dr. Careno now prescribed a purge, after which all the symptoms diminished. The seventeenth, the youngest child was perfectly recovered. In the eldest the fever continued; but after the lapse of three days it left her, and she also perfectly recovered.

A child, three years of age, was inoculated with matter taken from one of these children. The third day after the inoculation, the incised part became inflamed. On the fourth, a pustule appeared in each of the inoculated arms, which grew more elevated, red, extended, and hard. The fifth, both pustules were filled with a thin ichor; the child, at the same time, was perfectly well. The sixth, the pustules became larger; in the evening the boy was a little disordered, which was succeeded by a shivering, and he remained the whole night in a strong fever. The next day he was very well, the matter in the pustule in the same state as before. The eighth, entirely without fever. The pustule increased, and was more filled with matter; no pustule to be perceived on any other part of the body. The ninth day, shiverings, and the pustule more enlarged; in other respects the child was perfectly well. The tenth, a small scab on the apex of the pustule. The eleventh it dried, and the twelfth it totally disappeared. During the whole disease the pustules were filled with a limpid ichor. Three weeks after, the scab dropped off, and the skin was completely healed. A child, 18 months old, in perfect health, except that he had the *crusta lactea*, was inoculated from the pustule of the above-mentioned child, the matter being inserted in three slight incisions. The following day, the parts in the neighbourhood of the incisions on the right arm were inflamed. The fourth day, three small pustules shewed themselves. The sixth, two of them increased, but the third disappeared. The eighth, unquiet rest, somewhat feverish. In the morning considerably better, the pustules still increasing. The ninth, fever returned. The tenth, the pustule

pustule dried away, and the patient completely recovered, having no pustules on any other part of the body. These two children were afterwards inoculated with the virus of small-pox without being infected.

In Hanover, Dr. Ballhorn and Mr. Stromeyer inoculated twelve children with the virus of cow-pox; in seven of whom it produced the disease; in three the eruption was general; all had feverish symptoms, and tumours more or less in the axillæ, with inflammation in the inoculated part, but without pain. When the scab fell off, pus was discovered, and not till five weeks after did the inoculated part begin to cicatrize. All the symptoms were much milder than in the small-pox inoculation. The cow-pock inoculation produced no marks.

Dr. Lentin writes the following account, dated 27th July, from Hanover: As the inoculation for the small-pox extended itself from Hanover through the rest of Germany, so the inoculation for the cow-pox was at first instituted at Hanover. It has now been known more than a year; and although we have as yet no decisive result, it would, however, be interesting to have some account of its progress; but what we have been able to learn, seems to promise its general adoption.

Since this period, several experiments have been instituted by many medical men, and we have not heard of a single well-authenticated case, where a patient, who had been affected with the cow-pox, though ever so much exposed to the infection of small-pox, has caught this disease; much less of an instance where a person was dangerously ill or died. What adds greater weight to these experiments, is that the patients thus inoculated for the cow-pox were constantly exposed to variolous contagion. The small-pox, indeed, was not here epidemical, though the cases were more numerous than usual.

On the other hand, the following case related by Dr. Lodemann and Muhry deserves some attention. One of the inhabitants of Hanover, who had one of his children affected with the small-pox, resolved to have the other, not yet infected, inoculated for the cow-pox. He was inoculated, and went through the disease in the usual regular manner; but after about fourteen days from the time of his being inoculated, a variolous eruption appeared, though very benign, and proceeded through its usual stages. But nothing can be inferred farther from this case, than that the inoculation for the cow-pox cannot supersede a previous infection for the small-pox.

In Berlin also some experiments were instituted, as the following

lowing letter of Dr. Heine to Dr. Fisher proves: "I had not a favourable opinion of the inoculation of cow-pox. By the favour of Mr. L. F. I received from England the treatises of Dr. Jenner, and also at the same time some matter of cow-pox, both from him and Dr. Pearson. I inoculated several children with this virus, and I must confess, that the result in all these cases was the same as Dr. Jenner describes. Four weeks after, I inoculated one of these children, a girl about 8 years old, with the virus of small-pox; and also her brother, a boy about 10 years of age. The sister was not infected, but her brother had a considerable number of pustules, which suppurated. I now suffered the girl to sleep with her brother, but she nevertheless did not receive the infection.

"Dr. Pearson wrote to me, that out of fifty patients inoculated for the cow-pox, only one had an eruption similar to that produced by the small-pox. The vaccine disease is less virulent than the small-pox. But some days after the inoculation, namely, nine or twelve, the children became disordered, had a violent fever attended with copious perspiration. The influenza prevented me from pursuing my experiments with the virus of cow-pox; but as the influenza is now over, I shall prosecute them with the utmost ardour, and will give an accurate account of the result."

Art. 14. *Notice of the vaccine Disease introduced at Jamaica.* Communicated to the Editors by Mr. Ring.

WITH vaccine virus, sent by Dr. Croft, in November last, to Mr. Rooke, in the island of Jamaica, that gentleman, on the 18th of January, inoculated himself and fifteen negroes. It is remarkable, that the inoculation took effect on his own arm only, where it produced a perfect pustule. He was thus enabled to carry on the practice effectually; and when his dispatch came away, he had inoculated eight hundred negroes, and reports that they all went through the disease with scarcely any loss of labour.

This took place on the estates of —— Ellis, Esq. at Montpelier, near Montego Bay.

Art. 15. *A fatal Case of retroverted Uterus, with a Rupture of the urinary Bladder.* By J. SQUIRE, M. D. Physician to the Lying-in Charity, &c.

To the Editors of the London Medical Review and Magazine.

GENTLEMEN,

SHOULD you be of opinion, that the following statement of facts and observations may prove useful, please to insert them in your valuable publication.

On the 25th March last, I was requested by Mr. Bartlett to visit Mary Herbert, aged 37, Bath Court, Cold Bath Square. Mr. Bartlett informed me, that the patient had laboured under a suppression of urine twenty-one days. She had, as the poor woman expressed herself at the time the retention took place, "done a hard day's work at the washing-tub, and held her water for many hours." She supposed herself above four months advanced in her pregnancy. For some time past small quantities of urine had been discharged involuntarily upon cloths, in bed.

This account of her case immediately suggested to Mr. Bartlett the idea of the uterus being retroverted: the catheter was passed, and about one pint and a half of urine discharged. I saw her the next day, when, on examining per vaginam, I perceived the uterus retroverted, and firmly engaged in the pelvis. The catheter being again introduced, not more than two table-spoonfuls of dark-coloured muddy urine came away, tinged with blood. Placing the patient on her knees and elbows, I attempted to raise the uterus, but was unable to reinstate it without more force than I judged prudent to exert. Stools could not be procured by clysters, and the stomach rejected every medicine prescribed. The abdomen was considerably distended and painful; the hypogastrium and whole region of the pelvis were particularly and grievously affected by pain also; her respiration was quick and laborious; she had great oppression at her stomach, was thirsty, and vomited frequently; her pulse 130. I considered the case as hopeless; and on the following day, death put an end to her sufferings.

The poor woman having expressed a desire that her body should be opened, and the husband consenting, Mr. Blair was applied to for that purpose. He obligingly performed this office; Mr. Bartlett, Mr. Smith, and myself attending.

Appearances on Dissection.

The peritonæum and omentum were highly vascular, the

latter adhering to the posterior surface of the bladder, which was greatly thickened, and in the upper part of it there was an aperture sufficiently large to admit the introduction of a finger; the edges of the ruptured portion were jagged, and of a blackish colour, being in a gangrenous state: the uterus was flatulent to the touch. There was a large quantity of urine in the abdominal cavity; and the womb, being still retroverted, was so firmly wedged in the lower part of the pelvis, under the projecting angle of the sacrum, as to require considerable force to raise it. On opening the fore and upper part of the uterus, we found the placenta attached there. The fœtus, from its size, appeared to be in the beginning of the fifth month, correspondent to the woman's reckoning.

Practical Remarks.

The appearances on dissection fully explained the symptoms of the patient when living. The diagnostics of the retroverted uterus are in general so strongly marked, as not to be overlooked by an experienced or attentive practitioner; but as some fatal instances from this source are recorded, and others have come to my knowledge, I may be permitted to offer a few observations on the subject.

The retroverted uterus commonly occurs about the third or fourth month of gestation, in consequence of a retention of urine; it should, therefore, be a rule in practice, the complaint happening at the above period, to examine per vaginam, the circumstances related affording strong suspicion of the nature of the case. If a soft tumour occupy the lower part of the pelvis, and the os uteri be not discoverable, or with great difficulty, we may conclude the uterus to be retroverted. The bladder having been evacuated, and stools procured, an attempt should be made to replace the uterus; for remaining with its fundus turned upon the cervix, it presses forward against the pubes and backward to the rectum, and continues to act as a cause of the suppression of urine and constipation of the bowels. We are told, that, by regularly attending to evacuate the bladder, the uterus will regain its natural position, and I believe it will generally so happen; but if the difficulty of passing the catheter, on any future attempt, should be insurmountable, the event might prove fatal to the patient: indeed, where no such difficulty occurred, a woman lately died in ten days. Her water had been repeatedly drawn off; she was about four months advanced in her pregnancy, the uterus retroverted, and firmly lodged in the pelvis. It did not occur to the gentleman who attended, that the situation of his patient was such

as

as has been described; of course no examination per vaginam took place. The history of this case I had from a gentleman of unquestionable veracity, no longer since than last week, and to whom it was communicated by the person who attended the patient, and whom he considered competently skilled. An additional circumstance in this case may be mentioned, that two others of the profession were called in, neither of whom suspected the uterus to be in any way concerned.

I was some time ago called to a woman whose distended bladder after delivery was supposed by the midwife to be another child; and this was confirmed, in her opinion, by the touch of the retroverted uterus, which she took for the child's head: the patient having said, that she was at all times subject to a difficulty of making water, and in small quantities, the distended bladder was out of the question with the midwife, particularly as some urine had been discharged. The woman continued in excessive pain, with some intervals, for many days. The pain was considered as a symptom of labour. Her water was twice in the day drawn off by the catheter, and the uterus returned whenever it fell back, which happened several times during my attendance in the space of fourteen days. This woman died three weeks after delivery.

The bladder was thickened but not ruptured, and there was an appearance of peritoneal inflammation, and a discolouration and bruise at the fundus uteri. I have in my possession this uterus, and that connected with the ruptured bladder.

On the whole then we may infer, that an immediate reposition is desirable; and if it can be effected without violence, why risk a possible danger?

Let us, however, always make the attempt: we can desist without doing mischief. Having it in our power to quiet the patient's mind, by putting her in a state of security, and avoiding the disagreeable necessity of passing the catheter, probably for a length of time, are considerations of great moment; more particularly as this operation of insinuating the instrument has, as before noticed, proved insurmountable to men of experience, and eventually fatal to the patients: in others, where the urine has been regularly discharged, and the bladder not ruptured, such cases have also proved fatal.

I have only to add my sincere wishes, that these cursory remarks may, in any instance, prevent irremediable mischief by a timely

timely attention and discovery of the diagnostic symptoms, indicating the obvious means of affording relief.

I am, Gentlemen, with great regard,

Ely Place, Your obedient, humble servant,

22*d April* 1801. J. SQUIRE.

Art. 16. *On the Efficacy of the volatile Alkali to overcome pestilential Fluids; shewing the Wholesomeness of burning fossil Coal in Cities.* Communicated in a Letter from Professor MITCHILL to Mr. BLAIR, and by him to the Editors.

DEAR SIR,

IN the third number of the fourth volume of the Medical Repository, now in the press, I have inserted a public letter to you, of which I enclose a copy. You will see it refers to fumigation with volatile alkali, which may serve as a set-off against nitrous fumigation.

Copy of the Letter.

IT becomes me to make a grateful acknowledgment of the receipt of your excellent Essays on the new antisyphilitic Remedies, and of the London Medical Review and Magazine you were so polite as to send me last summer. I still suspect the gentlemen who attempt to cure, by acids, diseases produced by poison, are not in the best train of investigation; for we find, in America, that the septic gas, which excites our autumnal pestilence, is an acid; that dysenteric evacuations contain an acid; and syphilitic, cancerous *, and malignant ulcers contain acids. I am, therefore, of opinion, that the administration of alkaline remedies is more agreeable to the method of nature.

It is well known to you, that since the forests of many parts of Europe have been cut down, the scarcity and dearness of fuel in some cities have become so great, that the use of wood, for the purpose of keeping up fires, has been generally discontinued. Instead of this material, in some places peat or turf, and in others coal, have been dug from the earth, and substituted. And since the introduction of the latter, after

* The ACIDITY of the discharges of *cancerous* ulcers has been confirmed by many experiments among us, in continuance of those on the *syphilitic* pus, forwarded to you some weeks ago by the British packet.

Private Letter to Mr. Blair, dated Jan. 24, 1801.

the

the first opposition to it was overcome, an opinion has been very prevalent, that coal is a wholesome kind of fuel, and that there is something very conducive to health in its thick and disagreeable smoke. Its salubrity has thus been deemed more than an equivalent for its offensiveness.

Still, though popular opinion was in favour of coal, men of science have either disputed the fact, or differed with each other as to the manner of accounting for it; and, in a complicated case, it is not wonderful they should. In order to understand the question, it is necessary to attend to the analysis of coal by fire. This may be done by collecting the vapours of that inflammable substance, and examining their kinds and qualities. The Earl of Dundonald's method of making tar from it was a pretty good analytical process. I remember to have visited the manufactory of that noble and ingenious chemist, at Culross, when the coal-tar was much celebrated for preventing the entrance of the pipe-worm into the timber of ships. The vapours exhaling from pit-coal, by slow combustion, were collected into cold chambers, and there condensed. These vapours were merely the thick common smoke proceeding from the fuel when a little smothered, or not burning clear. From the liquor obtained by confining and cooling them, was procured, among other things, by distillation, a large quantity of volatile alkali, or ammoniac. The inference, therefore, is, that mineral coal, while it undergoes the operation of fire, affords an alkaline vapour, which, in common cases, is not collected into reservoirs, but diffused through the surrounding air, where it exists as a constituent part of the smoke of cities.

The celebrated Irish philosopher, Mr. Kirwan, who has made many experiments on various sorts of coal, with great care, has proved, in a manner quite as satisfactory, the formation of the volatile alkali from most species of that fuel, when subjected to the action of heat. The atmosphere of towns, where coal is the general material for making fires, may be, therefore, considered as containing a considerable quantity of ammoniacal gas, or alkaline air.

Great cities are almost constantly enveloped in the smoke of their own fires, especially in winter and in calms. Their inhabitants are in a perpetual fumigation; and, where coal is burned, the chief active material in this fumigating mixture is alkaline air. The inhabitants of London, Liege, and other places where fires are made of that article, are subjected daily and incessantly to fumigation with ammoniacal gas. Their

philosophers ought to have attended to this part of the constitution of the air in which they live; yet I do not know that they have discussed it properly. Its commonness is probably the cause of its having been overlooked; yet the inhabitants of London have been thus fumigated for more than two hundred years.

It is the disposition of the alkaline air employed in this fumigating process to unite with acids. In ordinary cases, a sufficient quantity of carbonic acid gas is formed during combustion, to allay its causticity, and to render it mild: therefore, the usual form in which it exists is that of the carbonate of ammoniac. But if an acid should present itself, for which this alkali has a stronger attraction than for that with which it is already associated, a combination with the new acid will take place, and the connexion with the former be dissolved of course.

Now, in many cases, such a stronger acid does exist in cities, and frequently in the form of vapour or exhalation. Experiments and observations, made by residents of New York, have shewn that such acidity can be smelled and tasted, that it corrodes metals, decomposes soap, curdles milk, effervesces with fixed alkalies, and imparts active qualities to the dews. These acid exhalations are of a noxious and stimulant nature, since they are known to act as the exciting causes of catarrhs, of dysenteries, yellow fevers, and various other kinds of pestilential distempers, often destroying life in a short time.

Mr. Thouvenel has proved that the vapours exhaling from putrid substances are attracted by chalk, and are highly acid; and Professor Chaptal, of Montpellier, has repeated the experiment with a similar result. This acid, which I have called septic acid, because produced ordinarily by putrefaction, has both the property of corroding silver, and of exciting pestilential fevers, when in the form of vapour, as the following account will shew:

Martyn's Abridgment of the Philosophical Transactions, vol. ix. p. 212, contains the case of Mr. Cox, surgeon at Peterborough, who tapped the abdomen to draw off the dropsical fluid remaining there, of a woman, a few hours after death, and was nearly killed by the poison of it. The included humours had reached to so violent a degree of corruption as to discolour the external parts with a green and livid hue; and, on flowing through the silver canula, deeply corroded it. On every spot where the least portion of this moisture had fallen

about the hands and fingers, angry pustules arose, which festered and broke; some of them healing soon afterwards, and others continuing very painful, and ending in universal convulsions, and great oppression of the vitals. The septic vapours which arose from this poisonous fluid were so subtle and malignant, that some of Mr. Cox's assistants, who were in the chamber only, and did not touch a drop of the fluid, were very much disordered, and afterwards had red and livid spots on their skins. This is a decided case of the local origin of pestilential fever from the vapours of a fluid which deeply corroded silver.

Pestilential acidity, it seems, may also exist in the atmosphere, after emission from putrid bodies of animals, from corrupting provisions, and from rotten excrements. And the production and emission of such mischievous acid vapours, in the vicinity of their sources, is one of the most frequent processes of nature. During the puerperal fever, the sourness of the exhalations from the patient has been so manifest in some cases, that fumigation with ammoniacal gas has been practised by Mr. Guinot, to overcome it. In many common malignant ulcers, as well as those of the syphilitic and cancerous kinds, the matter on their surfaces is of an acid quality. When the pus turns to vapour, in the crowded and filthy wards of ships and hospitals, there exists a sour exhalation also, which gives rise to infection and fever. Ammoniacal gas would be the proper substance for fumigations in such places. Its volatility makes it singularly proper for this purpose. It appears wholly accordant to the numberless other cases of wisdom displayed in the creation, that this light and penetrating alkali should be capacitated to reach every place into which septic acid gas may insinuate itself, and there to destroy its virulence. If ammoniacal gas is ever formed in putrefactive processes, its use and object are the neutralization of the same deleterious acidity.

In the second volume of Lowthorp's Abridgment of the Philosophical Transactions, p. 525 & seq. may be seen the opinion of Dr. Charles Leigh, that the volatile alkali contributes to the stopping of the plague in Grand Cairo. This discerning writer on the nitrian water of Egypt, affirms, that the nitre which is the ingredient in gunpowder is not to be understood when we meet with that word in Hippocrates, Galen, Matthiolus, Dioscorides, Pliny, and Agricola; for all these authors mean, by that term, soda, or the mineral alkali. Sad mistakes have arisen in the modern practice of medicine

from an ignorance of this distinction; when physicians, in imitation of the ancients, ought to have prescribed soda, have, instead thereof, dosed their patients with salt-petre! And what is worse, these same pernicious mistakes are repeated every day, with this modern nitre and its acid.

I now recollect a case of the exhibition of the latter, recorded in a book not often read. Poterius, the German chemist and physician, whose works are extant in a quarto volume, published 1698, at Frankfort on the Maine, declares, that he has known dysentery to be occasioned "nimio et incauto spiritus nitri in febribus usu, pro extinguendo calore," (Centur. i. p. 54)—by a too free and incautious use of spirit of nitre in fevers, administered with the view of extinguishing their heat. This curing of fever, by inducing dysentery, is a match for the common practice of inducing a bubo by the acid of lunar caustic, employed to cure a chancre!

Science is not always progressive;—it is sometimes retrograde. I shall give you an instance of it. Etmuller had taught long ago in Germany, "that every febrile paroxysm arose from an acid;" and that an acid engendered in wounds and ulcers stirred up symptomatic fevers. The reader of the third chapter of the fifteenth section of his Compendium, will find near twenty arguments in favour of this opinion, by the old professor of Leipzig. Sylvius de la Boe, of Leyden, was convinced that the malignant fever of that place, in 1669, was caused by a prevailing acid. It is very reproachful that these doctrines have of late been so totally neglected or forgotten.

In some foul dissecting-rooms septic acid vapours have occasionally been so abundant as to cause dysenteries and fevers, and otherwise exceedingly to injure the health of those who, by passing much of their time there, were particularly exposed to them. New dissectors are more liable to be incommoded by them than other persons. Where many carcasses are collected into a chamber, and are suffered to undergo the putrefactive process before they are removed, as happens sometimes in your metropolis, have you not known disorders to be caused thereby in your cooler climate, differing but in degree from those which arise in this town, during our intense summer heats, from corrupting beef, &c.? (See Med. Rep. vol. iii. p. 309 and 409.) If any of the laborious cultivators of anatomy in the Borough of Southwark, under the able directions of Cline and Cooper, for example, had suffered intestinal disorders, had contracted ill health from respiring the pestilential

atmosphere

atmosphere of their apartments, and had been obliged to withdraw awhile to the country to repair their exhausted constitutions, would not this be evidence that that noxious septic acid vapour was such as the old Egyptian embalmers used to correct by their nitre, or our soda, and which the modern chemists of France have found to be actually attracted by chalk, and, on obtaining it from that substance, to wear the altered face of the nitrous? And would not ammoniacal gas neutralize and overcome it?

Two facts are in this inquiry rendered plain enough for any body to understand: first, the evolution of ammoniacal gas from coal fires; and, secondly, the extrication of septic acid gas from corrupting substances. The former of these, by its neutralizing power, tends to render cities healthy, by overcoming the noxious and pestilential quality of the latter. Yet here a question occurs to me. As the salt called nitrous ammoniac is the offspring of the two airs, may not the gaseous oxyd of azote be one of its products, by natural or accidental decomposition, and thus sometimes abound in the atmosphere?

Cities where coal is burnt (I do not mean charcoal) ought to be free from the septic poison which excites fevers, in proportion to the quantity of ammoniac sent forth into their atmosphere. There can be little doubt that this is the fact. In England and Scotland, wherever this material is employed as fuel, infectious distempers have become less prevalent; though, notwithstanding its alkaline vapour from local causes, the septic virus may so predominate about the bodies, in the clothing and habitations of certain persons, as to cause malignant fevers of various types. The cities in the Netherlands and Germany, where coal is employed, have been less ravaged of late by pestilential diseases than formerly. The city of Richmond, in Virginia, has been referred to by some sensible observers, as an example of the febrifuge operation of the smoke of coal; the febrile ailments of its inhabitants having greatly lessened since their fires were generally made of that material.

When modern improvements are taken into consideration, it would be improper to ascribe the greater healthiness of cities now-a-days to their alkaline smoke alone. Greater regard to personal cleanliness, the introduction of better water, the more general use of soap, a more complete system of removing nuisances, all contribute toward lessening the mortality consequent upon the accumulated filth of former times. Among these,

these, ammoniac acts not by carrying out of town any of those baneful productions, but by rendering them harmless in or near the places of their origin. Much good may therefore be expected from the general use of coal, in process of time, in the large cities of America.

The antiseptic quality of ammoniac has been proved half a century ago by Sir John Pringle, who says, that the volatile alkali, so far from being dreaded as a deleterious part of corrupted bodies, is rather a corrector of putrefaction; though I find it employed for preserving animal substances from putrefaction as long ago as 1695. Blancard, the anatomist, in his Treatise on the Art of making Preparations (De Balsamatione nova Methodus, § 5,) recommends the preserving of dead bodies by means of rectified spirit of wine, mingled with a fourth or fifth part of spirit of sal ammoniac, distilled with quick lime (caustic volatile alkali;) for in that way they may be kept a great length of time (diutissimè conservantur.) He particularly mentions, that the delicate anatomical preparations of the incubated egg can be nicely made with this liquid, and be preserved fit for use and instruction at all times.

However, the good to be expected chemically from ammoniac, and indeed from the other alkalies, will be determined chiefly by the acidity present, and threatening or actually working mischief. Now, besides the cases in which I believe an acid to be a noxious agent in the living body, Hufeland is convinced of the fluid acidity of the lymph in scrofula; the French encyclopædists, of the concrete acidity of the stone in the bladder; and others, of the existence of lithic acid with soda, in the chalk-like matter of gout; and of another kind of acid in the pus of fever-producing ulcers. From such correct authorities as these, you may learn more than

> Omnia quæ, Phœbo quondam meditante, beatus
> Audiit Eurotas, jussitque ediscere lauros.—— VIRG.

Though some parts of the subject must be inquired into to a greater depth and extent. In this arduous undertaking I hope much from your helping hand, and from your continued exertions as a fellow-labourer with us; remembering always that

I remain respectfully, &c.

New York, SAMUEL L. MITCHILL.
December 18, 1800.

Art.

Art. 17. *Arrangement of Facts concerning Ulcers, Sores, and Tetters, shewing how agreeably these and similar Affections of the Skin are healed, in many Cases, by alkaline Applications. In a Letter from Dr.* MITCHILL *(New York Medical Repository, Vol. IV. p.* 149) *to* THOMAS TROTTER, M. D. *Physician to the British Fleet, &c. dated New York, September* 20, 1800.

FROM the great benefit derived to mankind by alkalies and soaps, and particularly from the pleasant effects wrought by them upon the skin, it would seem that the whole of their operation, when thus applied, would have been understood ages ago. Yet the facts, plain and obvious as they are, have not, as far as has come to my knowledge, been duly noticed. The caustic effects of the simple alkalies have been duly observed. The corrosiveness of ley made from ashes just taken from the heated hearth, or draining from a leach-tub, partly filled with quick lime, has been a long time familiar to washers and bleachers of linen and other cloths. They knew very well that the ley might be made strong and sharp enough to eat away the skin and flesh of their hands, and to destroy the firmness and cohesion of the goods. And from these accidents surgeons seem to have taken the hint of preparing alkaline caustics, which are generally little more than naked potash, or the vegetable fixed alkali deprived of its carbonic acid by quick lime.

Caustic potash, thus having been much employed in domestic economy, and sometimes in surgery, was generally looked upon as a fearful and formidable thing. As it was dangerous to be touched or tasted, there was good reason for popular uneasiness whenever it was brought in contact with the living body. In that form it was capable of doing great damage. Hence have proceeded, in all probability, the alarming stories about the corroding, acrimonious, attenuating, dissolving, and putrescent qualities of alkalies, found in such writings as those of Huxham, and in various other popular books. They seem in those ways to have got a bad character, which they have never wholly retrieved.

Acids, when united with alkaline salts, diminish remarkably their keenness and pungency. These neutral compounds are, therefore, by a great difference, more mild and manageable than the naked alkalies. And thus it is that several of them possess, at the same time, the virtues of simple alkalies, without their inconveniences.

It is known among farmers and dealers in horses in America,

rica, that when the skin of these animals is chafed by the collars, or galled by the saddles, a good application to the parts so injured is a weak alkaline lixivium, made by putting some common wood ashes in water. The wash disposes the sore to heal quickly. This application is commonly a carbonate of potash.

The white fine powder remaining after the combustion of hickory coals (juglans) has been deemed more neat and efficacious than common ashes from other species of wood, and applied, they say, very advantageously to relieve horses injured as before described.

Tobacco ashes have been recommended as very efficacious in removing that tetter or eruption called "the ring-worm." This too owes its activity to the alkaline salt with which it abounds.

Obstinate eruptions and sores about the mouths, lips, and chins of children have been cured in country-places by being sprinkled by their mothers with the nice and light ashes remaining after the consumption of hickory wood by fire.

Lime-water has long had a place in the materia medica; and, besides its internal use for urinary calculus, and disorders of the alimentary canal, has often been employed with advantage for ulcers on the legs and other parts of the body.

Indeed, the aqua phagedænica, made by dissolving corrosive sublimate in lime-water, is little else than a plain solution of alkaline or calcareous earth in water; for the lime immediately unites with a portion of the muriatic acid, into a muriate of lime, and the quicksilver, turned to a yellowish oxyd, falls to the bottom in the form of a powder. I consider the chief operative ingredient in this pharmaceutical preparation to be the lime-water.

Pliny mentions (Hist. Nat. lib. xxxiii. Proem.) the healing qualities of the ashes of the vine (potash,) in chaps, fissures, piles, excoriations, and erysipelas; and relates that (ibid. lib. xxiv. cap. 6) the ashes of pine and larch-tree bark are good for the places fretted and galled between the thighs, and for healing burns and scalds. The same author recommends the ashes of burnt sponge, which consist chiefly of soda with carbonic matter, for diseases of the eyes and eyelids, and for several other complaints (ibid. cap. 11); and he affirms (ibid. lib. xxi. cap. 10) that soda is good against the leprosy, and unseemly spots and freckles which blemish the skin, with other remarkable particulars to the same point.

I knew that for spongy and fetid gums, accompanied with bleedings,

bleedings, and with nastiness about the teeth, weak alkaline solutions were of sovereign efficacy to cleanse the mouth, to lessen the fœtor of the breath, and to dispose the diseased parts to become sound and healthy. I have for several years been in the habit of prescribing them to remove the sordes accumulated there in syphilis, scurvy, fevers, and, in short, in all other cases where the mouth had collected filth, and stood in need of being cleaned out.

Taught by such facts, I began to think that the purulent secretion in sores, wounds, and ulcers, underwent some other change than a mere thickening of its consistence, while exposed on their surface. There was the highest probability that a portion of oxygenous air underwent decomposition, and that its basis, attracted by the pus, imparted to it the qualities of an acid. And from the stimulating, corrosive, or other morbid operation of this acid upon the subjacent parts, many of the phenomena of ulceration might tolerably well be accounted for. — Chemistry did not here meddle with living parts or functions. Its principles were only applied to explain some of the phenomena of animal fluids, wherein no vital energy of any sort was presumed to inhere. Fluids, after secretion, have ever been deemed fair subjects of chemical analysis.—As I had, long before, been led to believe, that intermitting, remitting, and continued fevers, in all their modifications, were but the effects which oxygenated septon wrought upon the body, I was naturally led to a persuasion, that the fevers consequent upon deep and extensive ulceration, were ascribable to a similar cause. Thus the hectic paroxysms accompanying vomica of the lungs, consequent upon the admission of air into the purulent cavity of psoas abscess, and attendant on broad ulcerated and exposed surfaces of every sort, apparently arose from an absorption of septic acid, formed on the denuded spots, by a combination of a portion of atmospheric oxygen with the azotic material of the secreted humour. This, I thought, approached to somewhat of a rationale of hectic chills and heats, by referring them to the same general law of nature which governed the phenomena of other fevers. I have endeavoured to shew, in other places, (particularly in my piece on dysentery, soon to be published,) that the septic poison which produces febrile action is often formed in the alimentary canal, from the degenerated remains of food: it looked now almost as likely that virus, of nearly the same composition, was formed on the surface of ulcers, from the fluids effused there. I suspect some of the phenomena

mentioned in your chapter on malignant ulcer, in the second volume of your Medicina Nautica, proceed from the septic acid converted to a gaseous form, and becoming infectious. And I intend this letter as a sequel to that chapter.

This conclusion was strengthened by considering the qualities of the pus in many cases of ulceration. It seemed to devour the contiguous parts, and sometimes to eat away all before it, constituting what you have described so well. The exhalations from this destructive liquid were oftentimes noxious as well as offensive; and wherever they were abundant enough, as in the wards of military hospitals, and on board of ships, they evidently acted as the exciting cause of "fevers" among those who were confined in the same apartments. Here the septic effluvium of putrid ulcers was productive of consequences resembling those ordinarily occurring from the operation of similar vapours from other sources of corruption.—It was, however, scarcely to be doubted, though this kind of acidity was the most common, that, occasionally, some other than the septic acid was the morbid product.

Under the conviction that alkaline remedies were fully indicated as topical applications in the practice of surgery, I ventured to try them in a number of cases which fell under my care. The first instance was the venereal chancre removed by carbonate of potash, which is related at large in Med. Rep. vol. ii. p. 217, 218, first edition. Since which it has been in my power to see many other and more serious syphilitic ulcers of the primary kind yield to the same alkaline treatment. Indeed, in incipient chancres, the deliquesced carbonate of potash (lixivium tartari) is my steady prescription. I never knew bubo arise from its application, as frequently follows the use of septite of silver (lunar caustic.) It does not, like that metallic salt, destroy life and organization, nor cause the part to mortify and slough away; but it preserves a degree of cleanliness unknown under any other dressing. Some cases, which afterwards occurred under Dr. Rodgers and myself, were extracted from the books of the New York Hospital by Mr. Hayes, then the apothecary of that House, and published in the third volume of the Med. Rep. p. 302 & seq.

Emboldened by these instances of success, I directed secondary syphilitic ulcers to be treated with alkaline applications. When in their very foul state, the fluid carbonate of potash was applied by aid of a camel's hair brush, and repeated from time to time until the sore became more clean, which commonly happened in a few days. Afterwards, lint dipped

in

in lime-water, and kept moist with the same, was the common dressing; the sore being touched from time to time with the carbonate of potash, if deemed necessary.—In other cases, I ordered the ulcers, after having been duly alkalized, to be dressed with an ointment made by rubbing together, upon a tile, carbonate of soda and the cerate of wax and oil. This was spread upon lint, and applied in the common manner. Sometimes a poultice was directed, and sometimes not.

In cases of ulcerated buboes, and of venereal blotches about the skin, I have caused dressings of the same kind to be made use of; and I approve of them, and those herein mentioned, upon the whole, more than any others with which I am acquainted.

In one instance I was agreeably surprised by a very unexpected occurrence. A girl, whose constitution had been considerably injured by syphilis, was affected, in addition to disease of the genital parts, with an ugly and scabby eruption over her face and neck, and with an enlargement and inflammation of the lachrymal sack of the right eye. Determining to defer the particular treatment of the fistula lachrymalis until the general and more urgent disease of her constitution should have abated, I prescribed, besides other things, a weak solution of carbonate of soda in water, as a lotion for her face. This had the usual effect of disposing the eruptions to dry away, and disappear in a few days: but, what I had not at all expected at the time, the fistula lachrymalis disappeared too, under the continuance of the alkaline wash, and returned no more.

I am of opinion, that in old syphilitic cases with ulceration, the sick actually suffer a twofold distemper; one part of which was brought on by the original virus, and the other proceeds from the oxygenated pus constantly absorbed from the surface of the sores. By alkaline applications, this latter source of mischief is lessened, and the acidity of the pus is overcome; the local irritation abates, and the constitutional infection by it ceases; and thus, as the ulcers heal, the febrile stimulus which used to be produced there is proportionally diminished; and when they become cicatrized, they furnish not a particle of it any longer.—Latterly I became so convinced of the disposition to heal, induced by alkalies, that I ordered several deep and sinuous ulcers to be dressed with lint dipped in the fluid carbonate of potash: and the result here was no less agreeable than in the other cases.

Thus far I had proceeded, when, on reading the Medical

and Physical Journal for December 1799, I observed that a gentleman distinguished for his poetical as well as professional talents, Dr. Drake, had quoted Brugman's Dissertation on Pus, proving it to be an acid. These experiments, which I had never seen nor had any knowledge of until then, I should be glad to peruse. The establishment of this one fact fixes a principle of great moment in pathology, and enables us to practise upon ulcers, and the fevers which accompany them, upon something like a consistent and rational plan; and, more than this, puts it in our power to compare the phenomena of fever from the absorbed acid of an ulcer, with fever from the imbibed acid of dysenteric intestines, and the fever from the inhaled acid arising from substances putrefying in the open air; and to refer them to a general law of the animal economy, whereby oxygenated septon, acting as a poison, and known sometimes under the names of contagion, infection, and miasma, stirs up those varieties of commotion in the living frame.

It would be highly worthy of your official character, and wholly accordant to your various and benevolent plans for bettering the condition of seamen, to recommend alkaline dressings, among other things, for old and offensive ulcers, as the navy surgeons would have great opportunities of trying them, and of witnessing their good effects.—Hoping and labouring earnestly for the improvement of medicine and surgery,

I am assuredly, &c.

SAMUEL L. MITCHILL.

Art. 18. *Observations and Experiments on the mineral Water of Hampstead.* By JOHN BLISS, Member of the Royal College of Surgeons in London.

To the Editors of the London Medical Review and Magazine.

GENTLEMEN,

BY inserting the enclosed experiments and observations on the mineral water of this place in the next Number of your valuable publication, you will much oblige

Your humble servant,

Hampstead, April 16, 1801. JOHN BLISS.

IT has been customary, in giving analyses of waters, to describe the situation, climate, and other local circumstances of the place where they are found. The well-known situation

of

of this village, and the salubrity of its air, render such a detail unnecessary; more especially as it is not my intention to make invidious comparisons with other places, nor to contend for any superior medicinal properties this water may possess over others of a similar nature.

Previous, however, to entering upon a statement of the analysis, it may not altogether be foreign to the subject to give a slight sketch of its history, to point out its situation, and to state the opinion of a very ingenious chemist, as to the manner waters of this class may be supposed to receive their impregnation.

The estate on which it has its source was a gift of BAPTIST EARL OF GAINSBOROUGH, in the year 1698, "to trustees, for the use and benefit of the poor of Hampstead." In the original grant it is thus described: "Six acres of heath ground, lying, being about, and encompassing the well of medicinal waters."

And in a decree of the Court of Chancery, the estate is described as having on it, in the year 1719, "a tavern, coffee-room, dancing-room, tap-house, raffling-shops, a bowling-green, and the spring of mineral waters."

These circumstances make it highly probable, that the water was then in much repute, and that, like watering-places of the present day, it was frequented for amusement as well as utility. But, like them, it has also been subject to the caprice of fashion; for, in an account of it published by Dr. Soame, in the year 1734, he regrets that it was "less frequented than formerly;" and in a letter in that work from a Mr. Watts, then curate of Hampstead, it was observed, that "the walks are not so covered as heretofore, twenty or thirty years ago."

It does not however appear, that its efficacy as a chalybeate was neglected by the physicians of the time; for Dr. Soame enumerates the names of several who recommended its use in a variety of diseases.

From that period it has been gradually less visited as a place of amusement; yet it has been always the resort of invalids; a proof this, of the estimation in which the water has continued to be held. During the last twenty years it has progressively been increasing in reputation, and now, during the summer months, is much frequented by the inhabitants of the metropolis.

The spring rises on the east side of the village near the Long Rooms, and the water issues very slowly through the perforated bottom of a marble reservoir, from whence the superfluous

perfluous water passes through two pipes, at the rate of about a gallon in four minutes—a supply more than adequate to any probable demand.

Chemical philosophy has been frequently employed in endeavouring to ascertain how water may be impregnated with various substances, and some light has been thrown on this wonderful phenomenon of nature by the late improvements in chemical science: still, however, much remains unexplained, and affords an ample field for future investigation. The most satisfactory theory I have met with is contained in an analysis of Tunbridge water, published in 1792. The situation and soil of both places being so similar, and the analysis of the waters so nearly correspondent to each other, I feel myself justified in transcribing the whole passage:

"It is probable, that the spring from which they originate is at a considerable depth within the bowels of the earth, and that the iron which they contain is taken up in their passage to the surface. We suppose them, in the first instance, to be a common water, containing selenite, muriated magnesia, and common salt, in the small proportions just stated, together with a quantity of aërial acid, as yet in an uncombined state. After this we suppose them to pass through a stratum of iron-stone, with which this country abounds. In this stage, and not before, they become chalybeate; and from this time, till they reach the surface, the only substance they meet with is sand, which being itself strongly impregnated with iron, is rather calculated to improve than impair them. That the source is deep, and not subject to the changes which are constantly going on in the superior strata of the earth, appears from hence, that these waters, though covered with a sandy soil, are scarcely affected by rain."

The publication of Dr. Soame already alluded to is extremely defective as an analysis, but has some judicious observations as to the medicinal effects of the water: great allowance, however, should be made for the state of chemical analysis at that period, compared with the increased knowledge we now have in that science by the indefatigable labours of the experimental chemists of the present times; in this branch of it we are more especially indebted to our own countrymen, Doctors Babington, Pearson, and Garnett, but particularly to that accurate analyst Mr. Kirwan.

It is not my intention to enter into an explanation of the modus operandi of mineral waters employed as a medicine: the reader will find some very interesting and judicious observations

servations in a work on this subject lately published by Dr. Saunders, in which are combined the experience of an observant physician, and the accuracy of the philosophical chemist.

I have been induced to engage in this undertaking from a conviction (the result of long experience) that the Hampstead water possesses great medicinal powers — from a desire of making them more generally known to the medical world — and from the advantages I enjoy, from my residence on the spot, in conducting experiments of this nature. How far my attempts have succeeded, must be determined by those whose chemical attainments are superior to mine.

I cannot omit this opportunity of expressing my obligation to Dr. Babington, for his kind assistance in furnishing me with its gaseous contents.

The temperature of this spring is invariably from 46° to 47°; it is therefore probable, its source lies at a considerable depth from the surface of the earth; for it was not frozen in the winters 1795, 1796, or 1798, 1799, when Fahrenheit's thermometer frequently stood at 11°, and at one time so low as 7°.

Its specific gravity exceeds that of distilled water, both being brought to the temperature of 50°; and was found by me to be in the proportion of 269,3 to 269.

Dr. Babington was so obliging as to ascertain its gravity in his usual accurate manner, and found it in the following proportions, as 275,1 to 275; so that the difference in the result of our experiments is only one fifth of a grain.

Experiment 1.

Exposed in an open vessel at the variable temperature of 65°—68°, it exhibited the following changes:

In three hours the vessel was beautifully studded with air-bubbles; in six hours a variegated pellicle was formed upon its surface; in thirty-six hours it became turbid; and in four days it let fall a copious ochry precipitation.

Water taken fresh from the spring was subjected to the following tests:

Experiment 2.

An infusion of litmus was instantly reddened by it; this colour was fugacious, but was reproduced by fresh additions of the water.

Experiment 3.

Lime-water produced an instantaneous cloud, succeeded by a brownish

a brownish precipitation; which precipitation effervesced with, and was soluble in, all the dilute mineral acids.

Experiment 4.

The tincture of galls dropped into it, instantly produced a dark purple colour, which remained several weeks.

Experiment 5.

Prussiate of potash occasioned a remarkable brilliant blue colour; and on standing some hours, a precipitation of Prussian blue ensued.

Experiment 6.

Muriate of barytes caused an immediate precipitation; and on standing a few hours, a shining pellicle was formed upon its surface.

Experiment 7.

Acetate of lead occasioned a cloudiness and white precipitation.

Experiment 8.

Nitrate of silver produced white streaks, gradually changing to a pearl colour, and ultimately to a dusky blue. A precipitation succeeded in form of luna cornea; and like the test with muriate of barytes, it had, on standing, a shining pellicle on its surface.

Experiment 9.

Oxalic acid occasioned no immediate alteration; but, on standing twenty-four hours, there was a trifling white precipitation.

Experiment 10.

No change took place with either of the mineral or the acetous acids.

Experiment 11.

All the alkalies produced an immediate brownish precipitation.

Experiment 12.

With water exposed for twelve hours similar appearances took place, excepting that the colour with the tincture of galls and prussiate of potash was in a slighter degree.

Experiment 13.

A wine gallon of the water boiled a quarter of an hour became turbid, and deposited a brown precipitation, which was collected by the filter, and, when dried, weighed one grain and a half.

Experiment 14.

The carbonated substance of the last experiment, dissolved in dilute muriatic acid, underwent a trifling change of colour with

with the tincture of galls; but the presence of iron was instantly evident, on adding the prussiate of potash. No precipitation having taken place on adding the oxalic and sulphuric acids, it was precipitated by the caustic vol. alkali, filtered and exposed to the air in a heat of 200°, and treated with distilled vinegar; but was not found to contain magnesia, by the usual alkaline tests. It was then redissolved in dilute marine acid, and precipitated with aërated kali. This powder was of a brownish yellow colour, but became of a bright red, and was magnetic, on being exposed to a stronger heat.

The deaërated water of the 13th Experiment was submitted to the following tests:

Experiment 15.

An infusion of litmus was not reddened, even in the slightest degree.

Experiment 16.

Neither tincture of galls nor prussiate of potash had any effect upon it.

Experiment 17.

With muriate of barytes the result was the same as in the 6th Experiment, excepting that there was no pellicle.

Experiment 18.

With nitrate of silver, the same as in the last Experiment.

Experiment 19.

With oxalic acid, a more copious and speedy precipitation than with aërated water (requiring only three or four hours to produce it.)

Experiment 20.

With lime-water there appeared an immediate cloud separating into flocculi, which precipitated in twelve hours.

The precipitation in this experiment was more instantaneous and copious after the deaërated water had been deprived of its sulphuric acid by the nitrate of barytes.

Experiment 21.

No precipitation was produced, either by the fossil or volatile alkalies; with the semi-aërated kali it was trifling, and with the caustic vol. alkali copious.

Experiment 22.

A wine gallon of the water freed from its iron by ebullition and filtration was evaporated very slowly to dryness, and yielded $5\frac{25}{100}$ of residuary matter.

Experiment 23.

The residuum of the last Experiment was digested sixteen hours in four ounces of spirits of wine, and filtered. On

weighing the residue, it was found that there was soluble in this menstruum exactly $1\frac{75}{100}$ gr.

Experiment 24.

The matter insoluble in spirits of wine was digested twenty-four hours at the heat of 140° in distilled water, and filtered.

Experiment 25.

The insoluble matter remaining in the filter after the last Experiment was perfectly insipid, and weighed one grain; but on boiling it in five hundred times its weight of distilled water, barely half a grain of residuary matter was collected by the filter.

Experiment 26.

The alcoholic solution treated with dilute sulphuric acid yielded no precipitation; but there was a most beautiful flocculent appearance on standing twelve hours: after boiling it slightly, the sulphate of magnesia formed by the sulphuric acid was decomposed by semi-aërated kali, and an insipid earth precipitated, which, when dried at 130°, weighed one grain.

Experiment 27.

The aqueous solution of Experiment 24 had a copious precipitation with oxalic acid and muriate of barytes, also a trifling one with nitrate of silver; but no change was produced by the tartarous acid.

Experiment 28.

The solution obtained by boiling was precipitated by oxalic acid, muriate of barytes, and semi-aërated kali; but was not acted upon by nitrate of silver.

Experiment 29.

The solutions of the two last Experiments being evaporated to dryness, yielded $3\frac{12}{100}$ grs. of solid matter.

Experiment 30.

The residuum of the 25th Experiment was transparent on being viewed in the microscope, was insoluble in the marine acid; but by fusing it by the blow-pipe, with twice its weight of aërated soda, it became vitreous.

Experiment 31.

Sixteen cubic inches of this water furnish, by boiling, seven cubic inches of air, (temperature 55°,) one tenth of which is absorbable by common or by stronthian lime-water; the remainder being somewhat less pure than atmospherical air.

This experiment was made in London by Dr. Babington: the proportions not appearing satisfactory, he had the goodness

to

to repeat it with me upon the spot; but the results were exactly the same.

Chemical Deductions.

From the foregoing analysis it is clearly proved, that this water is a simple carbonated *chalybeate*; and not a sulphuric one, as described by Soame in his treatise upon it, by Rutty in his Synopsis, and by Dr. Donald Monro, in his account of mineral waters. For had its iron been held in solution by a fixed acid, it would not have been precipitated by mere exposure, nor by ebullition: neither would the iridescent pellicle have formed upon the surface of the water in Experiments 1, 6, 8, which must have been occasioned by the separation of the carbonic acid gas from the calx of iron it held in solution. It also proves, that the iron is not partly combined by the carbonic acid and partly by a fixed one, for it is not discovered in the deaërated water, either on adding tincture of galls, or prussiate of potash; the latter of which is so delicate a test, that, according to Bergman, it will discover $\frac{1}{80}$,oooth part of mere iron in 5,5 pints of water. It also appears by the colorific test in Experiments 4 and 5, and likewise by the 13th and 14th, that the Hampstead water contains a larger proportion of that metal than the Tunbridge, and other waters of a similar nature in the neighbourhood of the metropolis.

It likewise proves, that the carbonic acid gas, though only $\frac{1}{23}$rd part of its bulk, is mostly uncombined, as appears by the facility with which it reddens the infusion of litmus, by that colour being evanescent and capable of reproduction by repeated additions of the water, and by the small quantity of aërated matter discovered in it; for the solution of which, in a large quantity of water, a small excess only is sufficient, as ascertained by Dr. Garnett, in his analysis of the Moffat and Harrowgate chalybeates, by a late analysis of Tunbridge water, and likewise by Bergman in the water of Medevi; for though only six cubic inches was found in the cantharus (5,5 English pints,) yet it fugaciously reddened litmus, and held in solution four grains of carbonated iron.

We also learn from Experiment 14, that there is no other substance than iron held in solution by the carbonic acid gas; for had there been carbonated lime, it would have been precipitated by the oxalic and sulphuric acids; or had carbonated magnesia existed, it would have been taken up by the distilled vinegar. But the non-existence of any other carbonated

substance is farther proved by the experiments with the acids; which, by their superior attraction, would have seized any earthy substance so held, and the air, in quitting them, would have been discharged in bubbles.

It is further proved by Experiments 6th and 17th, that it contains a portion of sulphuric acid, where the barytic earth in the muriate of barytes quits it, and forms baro-selenite; and that this acid is united to lime in the state of selenite, is clear from the slight precipitation with oxalic acid in Experiments 9th and 19th, with the tests employed with the aqueous solution in Experiments 27th and 28th; in the last of which its existence is ascertained beyond all doubt, from its difficulty of solution and insipidity.

It is also evident from Experiments 8th and 18th that it contains muriatic acid; and that this acid is combined both with magnesia and soda, is proved by Experiments 26th and 27th: but it is probable that it contains no other muriate. Had any other earthy one been taken up in the alcoholic solution (muriate of lime, for instance, which seems the only one compatible with it in this state,) a precipitation would have ensued on adding the sulphuric acid; but the subsequent precipitation of the sulphate of magnesia with the semi-aërated kali proves it, without leaving a doubt.

The alkaline union of this acid is clear, from its being detected in the aqueous solution, (the earthy muriate having been previously taken up by the spirituous menstruum;) and that it is the fossil, and not a vegetable alkali, is clearly demonstrated by the tartarous acid producing no change upon it. The quantity, however, of this ingredient must be trifling compared with its associate the sulphate of lime, partly on account of the slight change produced by its tests, but principally on the residuum exhibiting very few cubical crystals, on being placed under a microscope.

The residuum which was collected by the filter in the 25th Experiment could be no other than siliceous earth, from its transparency, insolubility, and vitrescibility.

Hence it may be concluded, that the solid contents, in a wine gallon of this water, are nearly in the following proportions:

			Grs.
Of oxyd of iron	—	—	1 $\frac{50}{100}$
Of muriate of magnesia	—	—	1 $\frac{75}{100}$
Of sulphate of lime	—	—	2 $\frac{12}{100}$
Of muriate of soda, nearly	—	—	1
Of silex, about	—	—	$\frac{38}{100}$
		Total	6 $\frac{75}{100}$

And

And that the gaseous contents of a gallon are as follows:

	Cubic Inches.
Of carbonic acid gas — —	10,1
Of an air somewhat less pure than atmospherical	90,9
	101

Practical Inferences.

As the medicinal effects of all carbonated chalybeates are attributed principally to the iron and the carbonic acid gas they contain, except what may arise from mere dilution, it would be of little importance to ascertain the rest of their contents, but for the sake of philosophical accuracy: in this instance they are too minute to produce any sensible effects on the constitution, and the same proportions of them may be found in almost every spring water used for the common purposes of life.

It may be observed, that the quantity of iron it contains is very small when compared with the usual preparations of that metal given internally; for at its highest estimation there is only one grain and a half of its oxyd in a wine gallon; and as the oxyd, according to Lavoisier, contains only $\frac{77}{100}$ of mere iron, there can be little more than one grain of that metal in a gallon—a quantity which might appear (if its effects were not fully established) too minute to produce any sensible alteration in the system, from the small doses usually taken of the water.

The rationale of its action, and of most of the instruments employed in the healing art, is extremely obscure; and proves, notwithstanding all the aids we derive from anatomy and physiology, the fallacy of reasoning but from observation and experience. The modus operandi of this particular metal has given rise to a variety of hypotheses; some contending that it exerts its operation solely upon the stomach, and by the well-known sympathy of that organ with the whole animated system, its tonic effects are produced: others, who do not deny the above hypothesis, contend, that it is capable, and does enter into the circulation, where its effects as a stimulant, tonic, and deobstruent, are produced. Admitting the truth of either theory, this preparation must have peculiar advantages from its gaseous union, its minute division, and extensive diffusion.

I shall now proceed to give some account of its usual medicinal effects, which I am in some measure enabled to do from my residence upon the spot.

Like other waters of the same class it is undoubtedly stimulant; with some persons it occasions nausea and slight vertiginous affections: this inconvenience, however, is readily obviated, either by diminishing the dose, or omitting its use for a few days, especially if care be taken to empty the bowels by some gentle laxative.

It generally operates powerfully by urine, and usually occasions constipation: this latter circumstance is easily remedied, either by the occasional use of an opening remedy, or, what is preferable, the constant addition of a small quantity of Epsom, Cheltenham, or any other aperient neutral salt, which renders it little inferior in efficacy to the celebrated waters of Cheltenham or Scarborough.

This combination might lead to a refinement in practice, by uniting with this chalybeate the simple saline water of Kilburn *, which is barely two miles distant, and might be conveyed hither without any change of its properties.

The usual season for drinking it is from April until the end of October; the quantity taken must be varied according to the age, disease, and constitution of the patient: in general, the best method is to begin with a quarter of a pint before breakfast, another an hour after it, and a third about noon; gradually increasing the dose to half a pint, as the stomach and head can bear it: this quantity may be persevered in daily for two or three months, when it will be judicious to omit its use for a few weeks; for, like all other tonic remedies, a partial discontinuance is frequently useful.

This water is very beneficial in all chronic diseases which arise from languor of circulation; where there is general debility of the system, or laxity of the solids; and in all cases where tonics and gentle stimulants are required. For instance, it is particularly serviceable in dyspepsia, asthenia, hypochondriasis, chlorosis, amenorrhœa, menorrhagia, leucorrhœa, and in all diseases of mere debility: but great circumspection is required in its exhibition, where there is any organic disease, or much febrile irritation.

It is necessary to observe, that it should be drank upon the spot, as it will lose much of its activity by exposure; and that in most cases its beneficial effects are increased by the exercise of riding or walking, according to the state of the patient and the nature of his disease.

* As no satisfactory account of *Kilburn* water has hitherto been published, it is my intention to make an analysis of it at some early opportunity.

Art.

Art. 19. *Report of the Diseases prevailing in London from the 20th of March to the 20th of April.* Communicated to the Editors by Dr. MURRAY, Physician to the Public Dispensary.

FEBRIS intermittens		1	Epilepsia	—	1
Febres continuæ		35	Dyspnœa	—	4
Ophthalmia	—	1	Pertussis	—	1
Pneumonia	—	10	Colica pictonum		1
Rheumatismus acutus		4	Diarrhœa	—	5
——————— chronicus		6	Hysteria	—	3
Lumbago	—	2	Tabes	—	1
Chiragra	—	1	Hydrops universalis		2
Erysipelas	—	1	Ascites	—	1
Scarlatina	—	3	Anasarca	—	5
Urticaria	—	1	Hydrothorax	—	1
Epistaxis	—	1	Amenorrhœa	—	8
Hæmoptysis	—	2	Psora	—	3
Phthisis	—	18	Morbi cutis chronici		5
Menorrhagia	—	1	Asthenia	—	13
Leucorrhœa	—	5	Cephalalgia	—	3
Hæmorrhagia intestinalis		1	Pleurodyne	—	5
Catarrhus	—	18	Febris infantilis		2
Dysenteria	—	2	Verminatio	—	1
Apoplexia	—	1			
Paralysis	—	1	Total number of cases		197
Dyspepsia	—	17			

The continued fevers of this month, though scarcely more frequent than in the two preceding, have assumed an appearance more nearly approaching to the type of those fatal fevers, which prevailed during a part of the last spring. They have been chiefly characterized by extraordinary flushing of the face and redness of the eyes, with confusion of thought from the first attack, very soon proceeding to violent delirium; and with spasmodic affections of various muscles, amounting, in some instances, to absolute convulsions. Formidable, however, as these symptoms are, the disease has not terminated fatally in any of the cases here adverted to, except where its violence was aggravated by the unfavourable circumstances which subsist among the lowest orders of the poor, and in the comfortable and well-ventilated houses of the superior classes of the people. In the less miserable habitations, it has

has generally declined on the eleventh or fourteenth day, going off with a manifest critical evacuation, chiefly by sweat.

The sudden changes in the temperature of the atmosphere, from the warmth of summer to the frost of early spring, have occasioned so great an aggravation of the chronic pulmonary diseases, that many more phthisical patients have applied for medical aid than for several months before; and an unusual number of deaths, in cases of this description, has taken place during the last month.

Among the cases of cutaneous affection formerly recorded, was one of the pompholyx, or pemphigus chronicus; which consisted in an eruption, chiefly on the arms, of vesicles, varying in magnitude from the size of a pea to that of half a walnut, and containing a thin, colourless liquor, which, when effused, by the violent or spontaneous rupture of the vesicles, produced considerable irritation of the neighbouring skin. The patient was a female, of a florid complexion, 20 years of age; her general health not affected, except that the menstrual discharge had been interrupted about the time that the eruption appeared. The disease had subsisted a month, constantly increasing until the crusts left by the successive breaking of the vesicles, the formation of new blisters, and the inflammation of the intermediate space, had so far occupied the arms, that scarcely any perfect skin remained.

As the obstinacy with which this disease resists the medicines usually employed for its removal, is well known to all who have had to contend with it, a remedy hitherto not tried in the treatment of it was administered in the present instance. The patient was directed to take, twice every day, a pill of phosphorus, which was said to contain a grain of that substance; but it cannot be asserted with confidence, that this was the precise quantity *. In two days after the commencement of this course of medicine, a visible alteration took place in the state of the eruption: the vesicles already formed became stationary as to fulness, or appeared flaccid, as if the contained fluid were partly reabsorbed; fresh blisters came out more slowly, and did not increase; and at the end of five

* These pills were prepared by diffusing phosphorus in oil, and adding a sufficient quantity of pulvis tragacanthæ compositus: but from the strong tendency which it has to unite with oxygen, it is probable, that in the latter part of the process some considerable portion of it was decomposed; that this was the case, is rendered still more likely by the effect afterwards produced by a smaller quantity of the medicine in a different form.

days

days scarcely any thing of the disease remained, except redness, and a crusty appearance of the arms.

The patient now complained of violent disorder of the system, acute pain of the stomach, sickness, vomiting, and headach: these symptoms were immediately relieved by the operation of a gentle purgative, succeeded by small doses of laudanum given at short intervals; and she continued well for more than a fortnight, taking no other medicine than a chalybeate. At the end of this time, however, the eruption returned with its former violence, and the phosphorus pills were employed with the same effect as before on the skin, but without disordering the constitution.

The case thus proceeded for six weeks longer; the affection of the skin constantly receding after the phosphorus had been given three, four, or five days, and again appearing at intervals of about a week from its discontinuance. The medicines employed during these intervals consisted of chalybeates, bark, antimony conjoined with mercury, and occasional aloetics; but they did not seem to produce any effect on the disease.

The patient had now taken forty-eight pills in the course of nine weeks, and an interval of twelve days had succeeded to the last disappearance of the eruption, when it returned with greater violence than before: but some difficulty having occurred with respect to the preparation of the pills, the phosphorus could not be immediately administered; and powdered bark, with a considerable quantity of ginger, and afterwards ginger alone, in the form of pills, were substituted for it. Each of these medicines appeared at first to check the formation of the vesicles, but at the end of three weeks the eruption had undergone scarcely any perceptible change. An emulsion was now given, consisting of oil of almonds, syrup, mucilage of gum arabic, and water, in which phosphorus was diffused, in the proportion of a grain to two ounces: of this, the patient began with taking a tea-spoonful, gradually increasing the dose until she took three table-spoonfuls, or three quarters of a grain of phosphorus, in the course of a day. From this quantity she perceived some degree of vertigo, and, as the eruption had by this time perfectly disappeared, she did not exceed it; but at the end of five days, as usual, discontinued the medicine. It may be proper to observe, that on the fourth day of taking the emulsion, the catamenia appeared, after a suppression of four months. This patient has since that time (March 10th) had no tendency to a return of the disease, except about ten days ago, when two very minute

vesicles appeared on the arms; they receded immediately on her taking the emulsion, and she is now in all respects perfectly well.

Even though the cure in this case should hereafter appear not to have been permanent, it will probably be allowed that the uniform effect of the phosphorus on the local disease makes it worthy of trial in similar obstinate affections; and this circumstance will perhaps be admitted as an apology for the length at which the case has been detailed.

April 23, 1801. T. A. MURRAY.

Art. 20. *A List of Cases which have occurred at the Finsbury Dispensary, from March 20th to April 20th, 1801; with practical Observations.* By Dr. REID.

	No. of Cases.
CHLOROSIS and amenorrhœa —	26
Menorrhagia — —	4
Diarrhœa — — —	11
Tussis and dyspnœa — —	39
Phthisis pulmonalis — —	9
Cynanche tonsillarum — —	2
Erysipelas — —	10
Continued fever — —	31
Chronic eruptions — —	29
Infantile diseases — —	33
Anasarca — — —	3
Cephalæa — — —	5
Epilepsy — — —	3
Hysteria — — —	4
Asthenia — — —	28
Hypochondriasis and dyspepsia —	19
	256

At this season of the year, scrofulous affections are more particularly apt to shew themselves in habits which have any tendency to the disease; a circumstance that may seem to oppose an opinion that has arisen, and in some measure is supported by the observation, that these complaints prevail more particularly in the northern regions of the world. It should, however, be considered, that the winter's cold, which has been gradually operating, cannot have produced its full effect

effect upon the constitution until the commencement of the spring. The antivital principle of cold cannot fail to produce debility, and all its numerous offspring of diseases.

In the more northern parts of this island few families, comparatively, are altogether free from scrofulous contamination. Even in this metropolis, instances not unfrequently are found in which the disease appears, accompanied with all its dangerous and disagreeable symptoms.

A considerable number of these has fallen within the district of the Finsbury institution.

Sometimes this complaint shews itself in inflammation and ulceration on the edge of the eyelids, which is apt to occasion an entire or partial loss of the lashes, and in consequence of being communicated to the eye itself, not unfrequently renders the exercise of that organ not only painful and inconvenient to the patient, but sometimes, by inducing blindness, deprives him entirely of its use.

Scrofula in many cases assumes the form of phthisis, which indeed may in general be regarded as an internal scrofula.

Frequently this complaint shews its malignant efficacy in producing ulcers and indolent tumours in various parts of the body, leaving indelible traces, disfiguring the form, impairing the easy and vigorous motions of the limbs, and inducing a variety of diseases, in which, if not altogether incurable, the patient has seldom any thing to hope but from submitting himself to the certain pain, and risking the precarious result of a surgical operation.

By far the most frequent shape in which the disease has subjected itself to the observation of the reporter, is an obstruction in the mesenteric glands. All the persons affected with the tabes mesenterica were young children.

Of the cases of scrofula, indeed, few have occurred amongst adults; a circumstance which, in the class of the extremely poor in London, may in part arise from their too seldom being able to provide for their puny and diseased offspring even a scanty and occasional supply of that nourishing and strengthening diet peculiarly requisite for the support of a scrofulous constitution.

In the treatment of scrofula, the writer of this article prescribed cleanliness, exercise, cold-bathing, and as much of substantial food as the circumstances of the patient, or those of his family, would enable him conveniently to procure.

As one of the best correctors of a relaxed and debilitated habit, port wine was in some instances strongly recommended;

but the expense of this article rendering it at present almost inaccessible to the greater part of dispensary patients, it was in general found necessary to substitute the Peruvian or some other of the barks that are made use of in medicine.

The multitude of remedies that have been proposed in the treatment of scrofula, demonstrate the difficulty of accomplishing a cure. Each has, in its turn, been at one time warmly applauded, and eagerly received; at another, as bitterly reprobated, and as generally rejected. Millepedes and burnt sponge, antimony and mercury, sassafras and mezereon, tussilago and cicuta, have successively had their career of triumph, and their days of disgrace; nor is it too bold to prognosticate, that the period will arrive when they will share the fate of so many other remedies which have now sunk into neglect, and which repose in the same peaceful oblivion with the ashes of their authors. Tonic remedies, indeed, have inherited, and seem likely to enjoy, a more permanent reputation. Instead of requiring correction, nature, in the disease at present under consideration, seems to be more in need of our friendly support and assistance. The internal remedies, from which the greatest success may be expected, are, the Peruvian bark, already mentioned, with the various preparations of steel, in conjunction perhaps with gently stimulating aperients; the muriated tincture of iron, in doses of from five to ten drops, poured from a two-ounce phial, three times a-day, has been given with signal advantage in a variety of scrofulous affections.

The barytic muriate has of late been proposed by Dr. Crawford, and appears, from the testimonies of many respectable authorities, to be well deserving of further attention. But it is necessary to caution the practitioner, who may be induced to give it a trial, against the admixture of noxious metals, with which the barytic solution is sometimes contaminated. Its impurity may be always detected by the addition of a small quantity of barytic lime-water. The dose should be carefully regulated, and gradually increased, lest it produce symptoms of nervous affection. It may be useful to remark, that twenty drops at a time is as much as an adult can bear with impunity.

The remedy which seemed to have the most striking, and the only one perhaps that had a permanent effect in alleviating the symptoms, or in abridging the period of the disorder, was a temporary residence at the sea-side. This afforded an opportunity to the patient of experiencing at once the salubrious influence of two elements, both of which have been found eminently

eminently conducive to the ease or the relief of scrofula, as well as all diseases which have their source in physical debility.

One of the most decided and obstinate cases of scrofulous affections was alluded to in one of the preceding reports, in which the patient suffered alternately from a sore in her breast, and a violent pain in her head: her complaint had been of long standing, and had not in the slightest degree yielded to the remedies which had been administered to her before her application to the Finsbury Dispensary. She seemed for a time to be relieved by the cortex Peruvianus, taken regularly in frequent and considerable doses.

After a trial of some weeks the cure continued to be imperfect. It was then thought right to recommend, as the only chance that remained of a perfect restoration to her former health and vigour, to settle during a considerable period of the summer, on the sea-coast. In consequence of a faithful obedience to this advice, her constitution seems since to be in a great measure regenerated, and the affections, which before were so troublesome to her, are entirely removed.

The preceding observations, with regard to the salutary efficacy of sea-bathing, ought to be qualified by the exception of its use in those instances where there is any morbid affection of the lungs.

In these cases, the sea generally aggravates the sufferings of the patient, and accelerates the termination of his life.

How large a number of the deaths we see inserted in the public papers is that of those which have occurred at sea-bathing places, where it is generally observed, that the deceased had gone for the benefit of his health!

The more than ordinary expedition with which death executes his destined task, in these fashionable resorts of gaiety and sickness, is strikingly exhibited to our view in their crowded records of mortality.

The authentic and melancholy enumeration of the victims to an untimely fate, one should imagine, could scarcely fail to awaken a gloomy presentiment in the mind, that in some measure might tend to counteract the disposition to hope, so easily imbibed, and so anxiously cherished, by the multitude of consumptive invalids; who, on the approach of each returning summer, hasten with eagerness to the coast, fondly expecting to find, amidst the waves and breezes of the ocean, that relief which elsewhere had been sought for by them in vain.

Red Lion Square. J. R.

Art. 21. *A Case of Lepra Græcorum, or Psoriasis inveterata.* By Mr. Charles Pears, F. M. S. &c.

(Illustrated by an Engraving.)

To the Editors of the London Medical Review and Magazine.

Gentlemen,

Having met with a severe case of that singular disease called the *Lepra Græcorum*, I was anxious to preserve the appearances of it, and therefore obtained the drawing which accompanies this communication. Your obliging readiness in accepting of what I have hitherto sent, excited the hope that this would not be refused; and should it be so far approved as to be made the object of an engraving, for more accurate delineation, I shall esteem myself highly honoured; and only beg that the following account of the case (drawn up in so much haste as to preclude the possibility of adding those observations I meant to have sent) will be received as a sufficient explanation, and that I may be allowed the indulgence of another communication for the remainder, at a future opportunity.

In July 1800, I was applied to by Thomas Stubbs, aged 49, who thus described his situation. He was attacked six years before, with a sense of stiffness in the legs and arms. The cuticle desquamated in pieces equal to the size of two fingers in breadth. This continued for some weeks, and occasioned such a degree of debility as to confine him to his bed; after which he recovered, and continued well for the space of four or six weeks. Another attack then commenced. The nails were shed, and succeeded by new ones. The patient sometimes experiences pain; but this has not been the case lately. His appetite is good; he is restless, from an itching which prevails all over the body. These attacks generally recur every three months; and, during their continuance, a quart of the cuticle has fallen from the body in branny flakes, every night, for a fortnight or three weeks; and half a pint has been removed from the bed two or three times during each day.

His bowels are regular. The debility is such as to prevent his working as a carpenter; and "when he stands long at the bench," pain follows the exertion. In 1796 and 1797 he was admitted a patient in St. Thomas's Hospital, but discharged without being relieved; and also from the Surry Dispensary, where he afterwards applied. His hands are sometimes

times so bad, and the fissures in them so deep, that all motion is prevented. The cuticle on these parts has desquamated in the form of a glove: from the feet also, in the shape of those members. The whole of the body suffers this desquamation, except the pubis, scrotum, &c. where it never has taken place, but where it has lately begun to shew a disposition thereto. The face and head are affected as other parts of the body, more especially the roots of the hair. The return of every attack is preceded by a violent itching, which always indicates its approach.

The general appearance of the body is of a dark or reddish brown, which appears more strongly marked when exposed by the recently fallen off white and branny cuticle; evincing a more striking contrast.

For the removal of this severe disease, I gave the following:

℞ Hydrargyr. muriat. gr x, Spt. ætheris nitros. ℥j, Tincturæ opii ℥j. M. Cap. gtt x bis in die.

℞ Hydrargyr. muriat. g iij, Aq. fontan. ℔ij. M. F. lotio. To be applied every night to the parts affected.

By September 8th, the skin became much smoother; the scales or flakes of desquamating cuticle were considerably diminished, and the patient generally much better, being able to walk, and also to work in a degree. The sensible heat of the skin was also much lessened.

October 13th. He was severely attacked with cholera morbus, on which account I discontinued the mercury; but the use of the catechu (as recommended in the London Medical Review, Vol. II. p. 563) having recovered him by the 15th instant, he again resumed the use of the former medicine.

24th. The red spots, instead of enlarging and producing scales, died away, and left the skin smooth and clear.

December 20th. The patient, disbelieving that the medicine had produced such a speedy effect, directed its use to be discontinued, in order to evince its power over the disease, which returned so soon with aggravated violence, that he immediately acknowledged his mistake, and begged for his medicine. Since this time, he has continued the use of his mixture and lotion, and found the attacks of the disease recur less frequently, and at longer intervals. The last, which occurred in March last, continued about four weeks, since which time he is again recovered, and finds himself in good health, continuing his work as usual. His body is in a very good and favourable condition. The dose of his medicine has been gradually increased to fifteen drops, three times a-day.

So

So far does the history of this case reach the present time. Its future procedure must, consequently, be an after recital; which I shall the more anxiously await, from the opinion of some, that mercury is always ineffectual, and generally hurtful, however contradicted by the successful practice of others ‡.

Thomas * says, "this truly horrid and loathsome disorder, which seems peculiar to warm climates, is evidently of a very contagious nature:" but this does not seem to be the case here, in colder situations; for the numerous family of the above patient, using every domestic utensil after him, were never affected by it. Lommius observes †, that "the fourth species of impetigo, called the leprosy, is of all others the most terrible, because it is incurable." This also appears to be, happily, an untruth, as the above instance, added to others, may demonstrate. Omitting, however, to enlarge further at this time, I shall only observe, that the annexed drawing is so far from being an aggravated representation of the limb, which fairly resembled the whole body, that it is not nearly so bad as the parts really were, both before and afterwards.

Rockingham Row, Newington Butts, I remain, &c.
April 29th, 1801. C. PEARS.

Art. 22. *Prize Question of the Society of Physic at Marseilles.*

THE following prize question has recently been proposed by the Society of Physic at Marseilles:

To determine, by comparative trials, which is the best mode of treating those malignant fevers, in which the brain is suddenly affected?

‡ Mr. Blair informs me, that he has repeatedly cured the Lepra Græcorum with small doses of hydrarg. muriat. given in conjunction with sudorific remedies.

* See Thomas's Medical Advice to the Inhabitants of warm Climates, p. 119.

† Vide Jodocus Lommius's Medicinal Observations, (Winter's Translation,) book ii. p. 184.

The Engraving to illustrate Mr. PEARS's Case of Lepra Græcorum should face page 262.

THE

LONDON MEDICAL REVIEW

AND

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ANALYSIS OF BOOKS.

ART. I. *Dissertations on Inflammation.* VOL. I. *containing, Preliminary Dissertation—On some of the Laws of the animal Economy; Dissertation II.—On the History, Causes, and Consequences of simple Inflammation.* By JOHN BURNS, Surgeon in Glasgow. In Two Volumes. Octavo. LONGMAN and REES, London. 1800. Price 16*s.*

THESE volumes contain part of a course of lectures, which the author read upon surgery, three years ago, at the Royal Infirmary in Glasgow. They are not addressed to surgeons already acquainted with their profession, "but to students, who as yet have their knowledge to acquire." How far these Dissertations are calculated to answer the author's design, our readers will judge from the following analysis.

In the FIRST DISSERTATION, which extends through 282 pages, the author attempts to explain some of the laws of the animal economy. He begins by making the usual division of natural substances, into the animal, vegetable, and mineral kingdoms; each of which, not excepting the latter, is considered as possessing an immaterial principle, deserving the name of life, and absolutely necessary for its preservation: he says, "without this enlivening principle, all nature

must be dead; and matter deprived of it must either cease to exist, or exist in a way which we cannot possibly comprehend. The union of the whole universe must be dissolved, and the beautiful dependance of one part on the rest for ever destroyed. We know, and are taught to believe, that the Great Being who formerly sent forth this active vital power, and bade the worlds live, will one day recall his gift. Matter shall then cease altogether to be, or shall return to that unknown chaotic state which poets have imagined, and vainly attempted to describe."

The author observes that "life is a principle which we can only detect and judge of by its operations or actions; and, when these are not exhibited, we are apt, though sometimes erroneously, to conclude, that the body is dead. The leading property of life, is to communicate a preservative power to every individual with which it is connected. This is sometimes effected by very evident and intricate actions; but, at other times, is exerted without any sensible operation. The crystal resists, to a certain degree, mechanical impressions, which would destroy its form. The blood when newly drawn, the sap of vegetables, the living egg, resist cold, by an imperceptible operation, to a much greater degree, when alive, than after their peculiar life departs. They resist all the efforts of chemical agents which act on common matter; nor is it possible to decompose or injure them in this way, until they lose their specific life, and descend in the scale of existence. This simple preservative power is a discriminating mark of the presence of life; but we cannot detect it until we apply destroying causes: it is the uniform and universal effect of the combination of life with any substance, whatever its nature or structure may be: it is the essential characteristic of life, which it must shew whenever it is present. But, when we find vital power united with a certain organization, then more varied phenomena take place; and these are called actions of the vital principle. In the plant, the bud expands, the stem shoots up, the food is absorbed, digested, and circulated; air is thrown out, and particular secretions take place. In the animal, these actions are still more evident, but more intricate, and infinitely more varied. They are the support of our health, and the source of all our disease."

This active and vivifying principle in animals, is not here confounded with the "intelligent principle or soul, which is quite a different thing from vitality," although Mr. Burns thinks any attempt to develope its precise nature would be vain and absurd: "it eludes all our researches; it does not come under

under the cognizance of our senses; and we might just as reasonably attempt to describe and comprehend a new sense, or detail the intimate nature of an unknown substance."

After this concession, we presume our readers will excuse us from the task of detailing the reveries and conjectures which fill the next pages of this work concerning the supposed qualities and agency of the invisible, untangible, and immaterial principle of life: "we know, however," the author says, "that there is such a principle, and that this principle, by the application of certain stimuli, exhibits certain actions or operations which are essential to life, and in which it consists."

We do not perceive that any new light is here thrown on so intricate a subject; for Mr. B. might as well have confessed his ignorance, as to inform us that the animating principle exhibits certain actions essential to itself, "and in which it (this active being) consists." Motivity and vitality, or action and life, are thus made synonymous terms, but cannot, with a shadow of reason, be transformed into a detached SUBSTANCE, *Ens per se subsistens.*

The other subjects discussed in this Preliminary Dissertation are, the vitality of the blood, the pulse, the equilibrium of action and sympathy, the actions of the nervous energy, the periods in morbid actions, the classification of actions, and the different systems of pathology. In the concluding pages of this Dissertation the reader is presented with a summary of the laws of action, agreeably to the author's ideas, which, for the most part, coincide with those of the late Mr. John Hunter.

We shall extract the author's classification or arrangement of actions; they are divided into the six following classes:

CLASS I.

A. Naturales.

Order 1. *Imperfectæ*; comprehending spasm, epilepsy, palpitation, asthma, dyspepsia, &c.

Order 2. *Accrescentes*; comprehending cholera, diarrhœa, menorrhagia, &c.

Order 3. *Inequales*; comprehending dropsy.

CLASS II.

A. Transpositæ.

Order 1. *Formantes*; comprehending aneurism, ossification of the soft parts, &c.

Order 2. *Secernentes*; comprehending metastases, hæmorrhage, vicarious of menorrhœa.

Order 3. *Sympatheticæ*; comprehending spasm, pain and in-

flammation supervening secondarily, and by sympathy in parts remote from those which were primarily affected.

CLASS III.

A. Similes.

Order 1. *Inflammatæ*; comprehending the phlegmasiæ of nosologists.

Order 2. *Stimulantes*; comprehending slight febrile attacks termed ephemeræ; and the action induced by wine, spirits, &c.

Order 3. *Sanguinantes*; comprehending hæmorrhagies and apoplexy.

Order 4. *Tonicæ*; comprehending the effects of tonic medicines, such as alum, galls, bark, &c.

Order 5. *Hecticæ*; comprehending phthisis, atrophy, &c.

Order 6. *Mechanicæ*; comprehending jaundice from biliary concretions.

CLASS IV.

A. Dissimiles.

Order 1. *Intermittentes*; comprehending agues, &c.

Order 2. *Typhoides*; comprehending typhus, plague, cynanche maligna, &c.

Order 3. *Venenosæ*; comprehending the bites of serpents, the effects of lead, laurel-water, &c.

CLASS V.

A. Mixtæ.

Order 1. *Eruptura*; comprehending small-pox, measles, &c.

Order 2. *Immundæ*; comprehending syphilis, cancer, elephantiasis, &c.

Order 3. *Glandulares*; comprehending gonorrhœa, &c.

Order 4. *Ulcerantes*; comprehending ulcers.

Order 5. *Connatæ*; comprehending scrofula.

Order 6. *Narcoticæ*; comprehending the effects of opium, hyoscyamus, &c.

Order 7. *Diminutæ*; comprehending scurvy.

Order 8. *Adauctæ*; comprehending pertussis, diabetes, &c.

Order 9. *Irritatæ*; comprehending the effects of mercury, arsenic, &c.

CLASS VI.

A. Mentales.

Order 1. *Idiopathicæ.*

Order 2. *Corporeæ.*

Order 3. *Symptomaticæ.*

This arrangement of diseases is rather novel than just; ingenious than useful. Much obscurity reigns throughout the classes, and in many of the orders the distinction is by no

means obvious. The first class comprehends "alterations in the performance of the natural action of a part of the body, or of the whole system, but not to such a degree as materially to change its nature, or render it new." This would seem to embrace every slight indisposition to which the human body is liable; for "such a degree as," &c. admits of great latitude. But, contrary to the terms of the definition, we find inserted under the third order *(Inequales)* of this class, dropsy. Now, in the several species of this disease, the natural action of a part of the system "is materially changed," and beyond "the degree" insinuated by the author. Farther, we would ask, what is the difference, the real difference, between the first order, *Imperfectæ*, and the third order, *Inequales*, of this class? The first of these the author defines "a diminution, interruption, or irregularity of the performance of some part, or the whole of the natural action;" and the last, "a loss of balance betwixt some part of the natural action." But does not a diminution of action in some part, or an irregularity, imply a loss of balance between that part and the rest of the body? and might not dropsy, with equal propriety, be referred to the first as well as the last of these orders; since in dropsy there probably is a diminution or interruption of action in the absorbents?

To examine all the other classes would be tedious to ourselves as well as to our readers. This specimen, we think, will be sufficient to shew, that, however just our author's notions may be in regard to the nature and treatment of inflammatory action, he cannot be complimented for having left nosology better than he found it.

We must not dismiss the consideration of the Preliminary Dissertation without inserting the author's remarks on the system, or theory, founded by Dr. Brown.

"Upon this system I would have expected, that very little observation would have been necessary to shew its absurdity; and I should have done no more than merely state it, were we not every day told of the progress which it is making. One great and leading error, which every one will observe, is, that he supposes the more life or excitability that any person has, the nearer he is to death. Here the dependance of energy for its production, upon the continuance of natural action, is overlooked. When the action is too little, energy is not produced; when the action is too great, or in a morbid degree, its production is not only injured, but more is expended than can be generated. These are the effects produced by a deficiency or increase of action, to a morbid degree. There can be

be no accumulation of life, or, were it to take place, as from want of food, for instance, then it follows, that any stimulus given before death should preserve life; and the living power being very abundant, the person ought easily to bear a strong stimulus, which is far from being the case.

"This, however, is a very trifling mistake when compared to the next error, which teaches, that all diseases consist entirely in different degrees of excitement of this life, and not in any new and peculiar operation or action which it performs. Do not all the phenomena of fevers, small-pox, syphilis, and almost every disease, controvert this doctrine in the strongest manner? Will every stimulant cure the venereal inflammation? Will wine cut short the progress of a fever? Is it debility alone that is to be regarded in the treatment of a fever, and stimulants alone that are to be administered? I will venture to affirm, that if this practice be followed out, no man can estimate the lives which shall be lost. If debility alone produces fevers, I will demand of the Brownonian, why, in the course of a few hours, the pulse falls from its great frequency almost to the natural standard, and that without any stimulant being exhibited, or the patient feeling, in the least degree, stronger, or being able to make one greater exertion? I shudder when I recollect the scenes which I have witnessed, and the miserable effects of the blind Brownonian practice. Wine and opium, I do most sincerely believe, are, in the hands of Brown's disciples, what fire and sword are in the battles of the cruel.

"From the apparent simplicity of this theory, the student is led to neglect the various operations of the system, and disregard the nicer symptoms and distinctions in diseases, being taught, that his sole province is to inquire into the degree of excitement, that he may bleed in one case, and give wine in another: and, to remove any scruples which may still remain in his mind concerning the radical differences of diseases, he is assured, in the strongest manner, that in no respect are they different, except in the circumstances of strength or weakness; that there are no specific operations of the living system, no alterations even in the fluids, (which were to the humouralist what the nervous system ought to be to the true physiologist,) modifying the disease; and that therefore he need not, on this account, think of varying his treatment; for all eruptions and conditions, thus induced, will yield to the sthenic or asthenic plan.

"From this leading error in the system, it is astonishing how

how little able many Brownonians are to distinguish betwixt two dissimilar diseases, which have some general symptoms in common. This, it may be said, ought to be placed to the account of the stupidity of the physician; but, certainly, the doctrines which this system teach, are well calculated to increase that natural stupidity, by giving little incentive to investigation."

Some strictures are next thrown out upon Beddoes's chemical theory of the oxygenated and disoxygenated condition of the blood in phthisis and other diseases; and upon Darwin's modification of Brunonianism. The following reflection relative to pneumatic medicine appears to us very just: "it is a very mistaken notion, that, because hydrocarbonate and other [factitious] airs, mixed with that which we breathe, give relief sometimes, therefore a diminished quantity of oxygen is useful. They forget that these airs are very powerful medicines, and act independently of their mechanically lessening the quantity of oxygen by occupying its place." But to the remark which immediately follows, we cannot attach that weight which the author does, for the reason we shall assign. "The proper argument," adds the author, "would be to prove, that the poor, in their low, ill-aired habitations, live longer in consumption than the rich; which few will believe." The advocates for a low situation in phthisis pulmonalis will reply, that consumptive patients among the poor, so circumstanced, do not perhaps live longer than consumptive patients among the rich, because they want other requisites besides a favourable atmosphere, viz. proper clothing, proper food, and a state of mind not depressed by penury.

The next Dissertation treats of SIMPLE INFLAMMATION AND ITS CONSEQUENCES: in which the author tells us, "the most obvious division of the action of inflammation, is into that affecting strong and healthy parts, and that affecting those which are weak; and, therefore, the order inflammatæ will consist of two genera, the inflammatio valida, and the inflammatio debilis: the specific distinctions will be the same in both of these genera, being founded upon the part affected: the varieties depend upon the duration and activity of the action: that which runs its course rapidly and actively is called inflammatio activa, sive acuta; that which continues longer, and seems to have become, in a manner, habitual to the part, is termed inflammatio passiva, sive assuefacta. Some of the species will naturally admit of only the first variety.

"It is the inflammatio valida et acuta which is here to be considered

considered at greatest length: the inflammatio debilis will come to be attended to, in examining the causes and treatment of mortification: the little which is necessary to be said concerning the inflammatio assuefacta, will be mentioned in the conclusion of this dissertation."

Mr. B. goes on to treat of the different stages, terminations, causes, and symptoms of inflammation, in which we find but little that is new or worthy of especial notice; but the following may serve as a specimen of the author's manner of reasoning:

"*Of the Consequences of Inflammation.*

"Having made these remarks upon the production of the symptoms of inflammation, I shall now proceed to consider its most frequent consequences or terminations, which have generally been said to be, adhesion or resolution, suppuration and mortification.

"Adhesion.—To illustrate the important process of adhesion, or the union of two living parts which have once been divided, it may not be improper to attend to the cause of reproduction in general, or the replacement of those particles which are daily absorbed. Neither absorption nor reproduction can take place in a dead body, but depend entirely on the action of the living principle. If this action be impaired, these functions are imperfectly performed; if, on the other hand, it be too high, then those processes are too rapidly carried on, and the new matter which is deposited is incompletely organized; its life is likewise less perfect, and its continuance is short. This is illustrated by what we observe in ulcers and inflamed parts. The new matter, or the organic particles, are furnished entirely by the arteries, and deposited by them, under the direction of the nerves; and the nature and organization of this matter varies with the action. These particles are furnished, at the moment of their formation, with the specific life of the animal, in a degree proportioned to the perfection of the formation; and their natural longevity observes the same ratio. They live and die from the same causes which influence the life of the body, considered as a whole; but their duration is infinitely shorter than that of the body. They quickly perish, or descend in the scale of existence; they are alternately absorbed and replaced. There is, thus, a continual round of death and reproduction going forward in the animal frame.

"In order that this process may go on, or that reproduction may take place, it is necessary that a void be formed by the absorption

absorption of the old matter; which void is filled up by new particles which adhere together, and preserve the organization of the part. If this void, instead of being made slowly by absorption, and being filled up the moment that it is formed, be made suddenly, and of a considerable size, by incision, the same effect is, in the end, produced. The arteries which we cut pour out their blood, but the quantity is gradually diminished until it ceases altogether, and a different and more limpid matter drops out. This has been called by some the lymph, and by others the serum, which filtered through the contracting vessels. But were this mechanical notion true, then, by varying the degree of pressure, and thus changing the diameter of the vessels, we should, at pleasure, make the discharge either red or limpid. It is more probable, that this is one of the most simple secretions which the blood yields, and that the appearance is regulated by the action of the vessels. If the edges of the wound be laid closely together, we next find, that the divided vessels, which have now become extremities, receive the action which the extremities formerly used to have when a void was formed by absorption. They throw out matter nearly the same with that which was formerly yielded, and the structure of the part is restored. I have said nearly, because, from the attending circumstances, the action cannot be so perfect as formerly; and therefore the matter furnished will not be at first exactly the same, and the deviation will be proportioned to the degree in which the action, in consequence of the injury, is increased beyond what it was in health. Hence, in parts where the action was slow in its performance, and small in quantity, the deviation will be most. Thus, when a bone is fractured, the callus is much softer than old bone; it is formed in greater quantity than formerly, and it requires some time before it is formed in the necessary degree of perfection, to enable the person to make use of the bone; but a similar injury done to the skin, or a muscle, will not be attended with the same effects; for the action is there, in health, much quicker and much greater: the deviation is, therefore, from the first, trifling, and soon ceases.

"Some have considered the process of adhesion in a more mechanical light, and have supposed that the lymph was poured out and glued the parts together, and afforded a bed, into which the vessels from the opposite surfaces might ramify, by which union was produced. This takes place, in the opinion of Mr. Hunter, owing to the vitality of the blood; but I ap-

prehend that it is fully proved, that whenever blood is extravasated it loses its animal life, and proves a stimulus to the wound, preventing it from uniting, unless the quantity be very small, in which case it is absorbed, and is thus removed. It is our great care, in surgical operations, to tie the vessels, and clear the surface from blood, in order to procure union, which ought to be attended with an effect contrary to our wishes, were adhesion to depend upon the uniting medium of the blood. Mr. Hunter likewise supposes, that coagula have the power of becoming vascular of themselves, and thus more firmly uniting the parts; but this is assuredly ascribing the actions of one species of life, and of one body, to that of another: we might as well attribute the actions of the life of a quadruped to the living principle of the polypus.

"The perceptible operations of the life of the blood are very few, and quite distinct from those of an organized animal. If it ever were to perform other actions, and assume an organized form, then it must cease to be blood, and become a substance with which we have no acquaintance; for hitherto we know of no substance which can become a part of an animal, and receive a regular form, except through the intervention of the nerves and vessels, which, by regular gradations, change foreign matters into part of the animal. It has, indeed, been said, that clots of blood have been injected; but, by the same experiment, we might also prove, that a sponge, or a bit of woollen cloth, were also vascular.

"Adhesion appears to be a more delicate process than joining parts with mucus, lymph, or any intermediate substance whatever; it appears to be nothing less than the action of that power, which is always operating in the system, and restoring the waste of the body; but, from the circumstances under which it is exercised, and the causes which tend to make it imperfect, the substance which is thrown out is not always perfectly similar to the adjoining parts, at least in extensive wounds.

"This process, which, when carried on in health, is called nutrition, has, in disease, been named the adhesive inflammation: but the term is improper; for adhesion never takes places until inflammation subsides; and it often is produced without any previous inflammation, and quite independent of it, without heat, without pain, and without extensive redness. Whenever a wound inflames, its lips separate, and pain is produced; when the inflammation is removed, then the parts adhere, and the pain ceases. Adhesion is, in this case, synonymous

nymous with resolution; indeed, resolution is almost always attended with adhesion. There is, however, this difference betwixt them, that adhesion may take place without previous inflammation, whereas resolution implies the existence of that disease. If, however, inflammation has preceded adhesion, then it is exactly the same with resolution, being a termination of the inflammatory action. He, then, who would talk of the adhesive inflammation, is just as much mistaken, as he who would speak of the resolving inflammation.

"In the natural state of the body we find skin adhering to cellular substance, and this to muscle, and this again to bone; and the same union takes place in disease, two dissimilar substances often joining together, or adhering; but, for this purpose, it is necessary that both be alive, and that the actions of both be in a proportioned degree.

"These observations on adhesion will serve to explain the termination of inflammation, called resolution, and therefore little more will be required to be said on that subject. Resolution is, by some, said to be merely a cessation of inflammation, the parts returning gradually to their former state without any intermediate condition; but if we attend more minutely to the subject, we shall find, that the inflammatory action, like every other new action, uniformly terminates by a secretion. Some actions terminate in new secretions, whilst others only increase the quantity of old ones. When the inflammatory action subsides, we have an increased discharge of the proper secretion of the part, or interstitial fluid, which is also considerably changed in its nature, and becomes thinner than it was during the continuance of the inflammatory action. The part, therefore, remains swelled until this fluid be absorbed; but the swelling is more diffused and œdematous, and the pain is gone, together with the redness. The organic particles are likewise deposited in greater perfection, and may be said to be a secretory termination of inflammation; because, during the violence of the inflammatory action, they were furnished in a very imperfect state, and were different from what they ought to be; but when resolution is accomplished they become again natural, and produce either adhesion, if there has been a division, or a renewal of the proper structure which has been destroyed by the inflammation, rendering the formative or nutritive action imperfect.

"*Suppuration.*—If resolution do not take place, owing to the original violence of the inflammatory action, or from any other cause, then, if the part be not killed, a secretion of a

different kind takes place, and the inflammation is said to terminate by suppuration.

" Concerning the formation, nature, and uses of pus, many opinions have prevailed, but by much the most universal is founded on the ancient doctrines of fermentation. By the Grecian physicians, pus was considered as a concoction of the blood or humours, effected by the powers of life, or by nature; and therefore the state of ulcers was attended to very much by Hippocrates in forming his proguosis, as he thus ascertained the degree of vital power, and the extent of the operations of nature. When the blood was effused into the cellular substance, then it was supposed to undergo a species of putrefaction or concoction, and to become converted into pus.

" When the component parts of the blood came to be well understood, and when the humoural pathology came to be illustrated by experiments, attempts were made to discover which part of the blood yielded the purulent matter. From some observations on the serum of the blood, Sir John Pringle was led to believe, that pus was formed by a concoction of the serum; for, by exposing this fluid, for some time, to a heat equal to that of the human body, a deposition was formed, bearing some distant resemblance to pus, from which it was considered as allowable to conclude, that inflammation produced an effusion of serum, and that this serum was by heat converted into pus. This opinion was keenly maintained by Mr. Gaber, who adduced many experiments similar to that just mentioned, in order to prove the doctrine. Upon these authorities, the doctrine of fermentation was adopted by Dr. Cullen, and copied from him by Mr. Bell, neither of whom seem to have remembered, that the productions which are yielded by an animal, either in health or disease, are yielded by processes peculiar to animal life, and which they cannot possibly imitate by any skill, or by the most elaborate concoction. That heat will coagulate a small portion of the serum, and make it furnish a precipitate, is a well-known fact; but it does not thence follow that it deposits pus. If the mere circumstances of becoming white and thick were considered as the only necessary changes which a fluid must undergo, in order to be converted into pus, then the lymph would be a much better subject for experiment-makers to work upon than the serum. Even the urine itself might be proved to be the source of pus; because Sir John Pringle, the great authority upon this subject, allows, that this excretion, in

in health, yields a precipitate entirely the same with that which is furnished by the serum, and which he supposes is a redundant portion of the nutritious matter escaping by the kidneys. But a positive proof against this opinion of concoction is obtained by considering the situations in which pus is formed; for we find it covering ulcers speedily after they have been wiped clean. Now, had pus been formed from serum, this serum could never have had time to have been digested, and it would have been absorbed by the dressings which were applied. Again, when the lungs become inflamed in people who have water in the chest, or when enterites is conjoined with dropsy, we find the inflamed viscera covered with pus; but, unless inflammation has been present, we never find pus in hydrothorax or ascites alone. It must then, in the cases where we find it, be considered as a secretion produced by inflammation, and not the result of concoction, otherwise we should find it in every case of dropsy.

"Some have supposed, that pus was produced by the dissolution of the inflamed part; but the putrefactive fermentation yields a very different product from pus: besides, in ulcers we daily observe an abundant flow of matter, without the smallest loss of substance.

"It has been already mentioned, that the inflammatory action changes very much the nature both of the interstitial fluid and organic particles; and these changes may be considered as approximations toward the production of pus, if we consider this as the ultimate secretion which is to be formed. From the continuance and degree of the inflammatory action the interstitial fluid becomes still more different from what it ought to be, and the organic particles become so imperfect, that they cannot supply the waste of the part, or renew its structure: the form of the part is then destroyed, and the cavity filled with a double secretion, called pus. These observations apply to parts of a simple nature; that is to say, parts which only form matter, to renew their loss by absorption and interstitial fluid; but there are other parts which have a third set of vessels, which are intended to secrete a matter not immediately subservient to the support of the part. When these parts are inflamed to such a degree as to induce the purulent secretion, then this fluid will also be changed, and form a third component part of pus, as we observe, for instance, in the mammæ during lactation, if the true glandular part has suppurated. If, however, the inflammation has been less violent, then the inflamed gland still continues to yield a milky

secretion;

secretion; but the milk yielded by that gland is not the same with that furnished by the rest. At other times, those third set of vessels yield the greatest part of the secretion in inflammation, as we see in the urethra; but, in this case, the inflammatory action is moderate, and the organic particles and interstitial fluid are not much affected; the first of these, at least, forming no part of the discharge, being perfect enough to remain as constituent parts of the organ.

"This process takes place, in different species of inflammation, with different degrees of rapidity; and the proportion of the different substances which form pus also varies. In simple inflammation, the quickness of the process depends, in part, upon the nature of the organ affected, but chiefly upon the violence of the action. The component parts, again, depend chiefly upon the nature of the part affected, but also, in part, on the degree of action. When bones inflame and suppurate, which they do slowly, it is chiefly the interstitial fluid, in a changed state, which is furnished, the discharge being thin, and often greasy. Tendons yield both the interstitial fluid, and part of the organic particles, but chiefly the fluid which lubricates their surface. Muscles, the brain, parenchymatous substance of the lungs, liver, &c. and cellular substance, yield both interstitial fluid and organic particles in the same proportion, in equal degrees of inflammation, and the discharge is little different, to appearance, in these different parts. Lymphatic glands yield chiefly the interstitial fluid, but also partly the organic matter, and most likely part of the lymph which they transmit. The conglomerate glands yield both the interstitial fluid and organic particles; but the latter, unless in violent inflammation, are in small quantity: they also yield their own peculiar secretion in an altered state. The testicles, for instance, when they suppurate, give a discharge, which consists of these three substances, but chiefly of the first, next of the last, and in least quantity the organic matter. Along with this is discharged the old substance of the testicles (which has not been yet absorbed) like threads. Mucous membranes, when they suppurate, yield chiefly their usual discharge in an altered state, next the interstitial fluid, in a smaller quantity, with scarcely any organic matter, the inflammation being seldom so high as to destroy its organization.

"The chills which precede extensive suppuration, or suppuration in delicate parts, are to be accounted for upon the general principle already mentioned, of every new action being preceded by symptoms of weakness during its formation.

Mr.

Mr. Hunter supposes, that the stomach is the great cause of those rigors, in consequence of its being 'the seat of simple 'animal life, and thereby the organ of universal sympathy of 'the materia vitæ.' It is, therefore, affected in all diseases; and the same effect is produced, as if directly injurious causes were applied to itself; which 'disagreeable applications' produce coldness: but it surely does not follow, that, because whatever excites squeamishness induces a temporary feeling of cold, therefore cold is always induced, in disease, by a similar state being excited.

"The coldness which precedes suppuration is great or little, according to the same causes which influence the degree of the cold fit which precedes inflammation, namely, the extent and degree of the action, and the delicacy of the part affected. The effect upon the system, of the purulent action, after it is fully formed, is likewise proportioned to these circumstances. Every local action, if extensive or violent, or if it exist in delicate parts, must affect the constitution, and induce a general disease. This is uniformly an affection somewhat similar to the local action, although the symptoms be in a much less degree, and sometimes different. Thus the local inflammatory action produces pain, heat, redness, and swelling; but the general action produces only heat, slight redness, and uneasiness, partaking rather of the nature of anxiety than pain. In the same way, the purulent action, which is a depraved action of the formative vessels of a part, produces, when it affects the system, an universal affection or derangement of these vessels, or a diseased action in them, marked by frequency of pulse and emaciation; the function of nutrition, or the deposition of organic particles, not being propely performed *. It is to this cause, I apprehend, and not to the mere formation of a quantity of fluid, called pus, that we are to attribute the bad effects of extensive suppuration, or ulcerations, or suppurations of the vital parts; for we cannot suppose that weakness, or hectic fever, is induced by these abscesses, or ulcers, acting merely as drains, destroying a certain quantity of blood, or nutritious fluid; otherwise the effect must always be proportioned to the quantity of matter, which is not uniformly the case."

The author concludes his first volume by the following remarks on the

"*Modi-*

* Hectic fever is never produced, except by such causes as affect the action of nutrition; such as the purulent action, swelling of the mesenteric glands, diabetes, &c.

"*Modifications of the inflammatory Action produced by the Nature of the affected Part.*

"In the course of this dissertation it has been mentioned, that, in many instances, the symptoms of inflammation are modified by the state of the part which it attacked. In some, the swelling is greater than in others; some parts are much more pained, and some feel much hotter than others.

"In the brain, inflammation produces simple pain without heat, a feeling of tightness and confusion, aggravated during the diastole of the artery. The eyes are red and ferocious, or unsettled, and very sensible with respect to light. These symptoms proceed from the connexion betwixt the eye and brain, by means of the short optic nerve. The intellectual senses are impaired, and the power of supporting ourselves in an erect posture is lost. The brain is rendered redder by inflammation, and more turgid. The formation of organic particles is less affected than in many other parts; and, therefore, the intimate structure of the inflamed part is less altered; but still there is a change produced, the matter being tougher, and more like polypus. The terminations are either resolution or gangrene, (in which case the portion becomes softer and thinner, and of a more dusky colour, or black, where there are membranes,) or suppuration; in which case a thick yellow pus is formed, and coma is produced. If this abscess be opened, the patient sometimes recovers, and the ulcerative action commences. The granulations are red and very vascular, which we learn by finding them, after death, to be of a dark bloody colour. The pulse is always quickened, and becomes hard; but its condition, with respect to fulness and smallness, is uncertain.

"When the eye is inflamed, the vessels become red and turgid; but the eye itself does not become larger. The sensation is partly that of a foreign body being in it, and partly of heat, or the same uneasy itchy sensation which heat produces when it acts on the eye. The termination is generally an increased secretion of exhalent fluid.

"The inflammation of the tonsil produces swelling, redness, and the sensation of simple pain, with very little heat. If, however, the action has been chiefly confined to the covering of the tonsil, or has been erysipelatous, then there is a sensation of heat and dryness. Any of the terminations may take place here; but that of gangrene is very rare in simple inflammation. When suppuration or ulceration take place, then the quantity of exhalent fluid, which is slightly changed, is increased,

creased; and the mouth is filled with a tough slaver. When the internal part suppurates, or the surface ulcerates, thick yellow pus is formed. Sometimes the superficial vessels throw out a thick yellow substance like coagulated lymph, (owing to a slight excoriation,) producing specks. The pulse is quickened, but is not in general very hard. Sometimes it seems to be quickened rather by the simple irritation, or pain, than by the sympathetic fever; and, in this case, it is soft.

"Inflammation in the chest produces acute pain, aggravated at each inspiration; the sensation of heat is very moderate; the terminations take place without any peculiarity; the pulse is hard and full, if the inflammation be moderate; but if it be excessive, or if it occur in weak people, the pulse is smaller.

"Inflammation of the trachea, urethra, nostril, &c. produces a sensation of smarting, with a slight degree of heat; the natural discharge is increased in quantity, and rendered thicker and yellow. When this happens, the pain abates. If the inflammation be more violent, then this termination does not take place; but the parts become more turgid and painful; the exhalent fluid, or natural discharge, is either obstructed, or is thrown out, like the interstitial fluid, thick and changed, as in other parts, forming a lining to the canal. If the inflammation be still more violent, then the organic particles also are affected and become imperfect, or ulceration takes place.

"When the stomach is inflamed the pain is generally acute, and often of the burning kind; whilst, from the increased sensibility of the stomach, every thing is thrown up. The pulse is small and hard; the anxiety and oppression are great: the termination which is most likely to take place is gangrene.

"Inflammation of the small intestines produces nearly the same symptoms, only the vomiting is not so excessive; the heat is always considerable, and often excruciating, as we observe in those who take arsenic. When the great intestines are inflamed, the heat is commonly less; and, if the inflammation be slight, it is even not at all perceived; the pain, however, is acute, and generally of the lancinating kind. The pulse is frequent and hard, but not so contracted as when the small intestines are affected. The termination most frequently is gangrene, if resolution be not obtained; but, in some cases, suppuration and ulceration take place, which is seldom, if ever, the case, when the small intestines are inflamed. The

intestines may also have their internal surface chiefly affected; in which case they are similar to the urethra, &c. only the system suffers more. This is productive of a dysenteric affection, or increased discharge of thin slime, and, consequently, is less dangerous than inflammation of the peritoneal covering, or of the whole substance, without this secretion. The same effects are produced in the bladder; for if its internal surface be chiefly affected, then the termination is most commonly an increased discharge of the slime; but if the whole substance be affected, then gangrene or suppuration is produced. The organic particles and interstitial fluid are more affected than in the intestines; for we find a thickening produced; and within the pores of the thickened substance there is a gelatinous fluid, which is the changed interstitial fluid.

"When bones are inflamed, the nature of the organic particles is changed, and they become much softer; the interstitial fluid is also altered, and resembles thin, fat soup: when this flows out, they are said to suppurate: the pain is great.

"When cartilages or tendons are inflamed, the pain is likewise great; the part swells and becomes redder, and more opaque, losing the shining appearance; and the interstitial fluid grows rather thicker. When suppuration takes place, the pain does not abate so much as in some other parts, because the action still is greater than the natural power of the part would produce. Inflammation here may also produce sloughs or gangrene.

"Inflammation of membranes is also very painful; their appearance, from the change of the nature of the organic particles, is always altered; they uniformly become thicker and more opaque; and this structure they often retain after the inflammation goes off, as we see in the lucid cornea of the eye.

"When muscles are inflamed they swell; the organic particles are in part affected; the interstitial fluid becomes thicker, and the power of motion is greatly diminished. The most frequent termination here is a secretion of the interstitial fluid similar to that in health, but in rather greater quantity. If, however, the inflammation has been more violent, which seldom happens in rheumatism, owing to the diffusion of the action, then the suppurative action is produced, as we observe in wounds, &c. The sensation is more of the wringing or pricking kind, than of heat or warmth, although there sometimes be a kind of confused sensation, or resemblance to warmth.

"The

"The peculiarities of glandular inflammation, with regard to suppuration, have been already mentioned. They have, in general, a considerable tendency to this termination; and therefore it is more difficult to have the inflammation resolved; but the same cause makes it almost impossible for gangrene to take place. The pain is generally pricking or lancinating, although in some particular glands, as, for instance, the testicle, it is more of the gravitating kind.

"When the cellular substance is inflamed, the swelling is considerable, and the sensation chiefly that of tension, or the same as if a person were rudely handling a very delicate part; but when the cutis becomes affected, the redness is great, and the feeling of heat very acute. All the terminations of inflammation may take place in the cellular substance; but the inflammation of the cutis generally ends either in a slight discharge of perspirable matter, followed by a desquamation of the cuticle, or in gangrene.

"These modifications of simple inflammation, dependant on the nature of the part affected, are likewise affected by specific modifications of the inflammatory action itself. Some of these induce ulceration in every part indiscriminately; some never end in suppuration; others tend chiefly to produce mortification; some are attended with the sensation of heat more than others, &c."

Of the second volume of this work we intend to give an analysis in our next number; when we shall consider the propriety of establishing, as the author has done, so many different species of inflammation.

ART. II. *A short Account of the Royal Artillery Hospital at Woolwich: with some Observations on the Management of Artillery Soldiers, respecting the Preservation of Health. Addressed to the Officers of the Regiment, and dedicated to the Master General and Board of Ordnance.* By JOHN ROLLO, M.D. Surgeon General, Royal Artillery, &c. Octavo. 173 pages. MAWMAN, London. 1801. Price 5*s*.

ALTHOUGH this little work may seem to be of a local nature, and therefore not very generally interesting, its contents are such as may be read with advantage by all persons concerned in the establishment or regulation of an infirmary. The author first gives an account of the situation, structure, and economical arrangement of the Royal Artillery Hospital; to

which he has annexed some observations on temporary buildings and military hospitals; on huts and tents; on hospital ships; waggons and other conveyances for the sick; and on the convalescent barrack at Woolwich. The pages which describe the means employed by Dr. Rollo to prevent and destroy contagion are too important to be passed over; we, therefore, subjoin an extract from that part of his work.

"When a soldier is taken sick he is immediately reported to, and examined by a surgeon; and if his complaint is likely to continue twenty-four hours, he is ordered into the Hospital. On his admission, an inventory is taken of his clothes by the orderly non-commissioned officer who conducts him, and who delivers it, signed, to the matron, and he takes a copy in exchange, signed by the matron, and it is delivered by the paymaster-sergeant of the company to whom [which] the man belongs. The patient's clothes are taken from him, and deposited in the store-room or closets. His face, hands, and feet, are then washed with warm water and soap; but in cases of infection he is washed entirely. After which he is either put to bed, or dressed in the hospital uniform, and placed in the proper ward. The patient's shirt and night-cap are changed twice a week, and the gown, waistcoat, and trousers, once a fortnight. These are the stated times of change in ordinary cases; but the linen and uniform are changed oftener in those cases which may require it. When a patient dies, his bedding is completely removed, to be washed or scoured.

"In lousy patients, and in cases of apparent infection, the clothes are put in the oven and baked; they are then taken out and suspended in the fumigating-house, where they undergo fumigation; afterwards they are exposed to the air, and whatever parts of them can be washed are so.

"Every deserter or person joining the regiment from a prison or jail, is examined by a surgeon before he is taken into the barracks; and if he has the least suspicious symptoms, or his clothes are dirty, or give out that peculiar smell which contagion conveys, he is received into the Hospital, and goes instantly through the operation of bodily cleansing, and his clothes of washing, baking, and fumigating. He is placed in a separate ward."

All intercourse among the fever patients is prevented, "except what is indispensable, by a sentinel placed on the outside of the door of the gallery. By these simple means invariably prosecuted, infection does not spread in this Hospital; how-

ever, something may certainly be attributed to the means which follow:

"Take of pulverized manganese, two parts;
Common salt, four parts;
Oil, or acid of vitriol (sulphuric acid,) three parts;
Water, one part.

"A suitable proportion of this mixture is put into an earthen vessel, and suffered to remain until no vapours arise from it, or its peculiar smell is not perceptible. When a patient is admitted with an infectious disease, or when there are patients with sores having offensive discharges, one or two gallypots is placed in the wards, with about three ounces of the manganese and salt, to which is added half an ounce of water, and then is gradually poured on the whole a part of the ounce of the oil of vitriol (sulphuric acid;) the remainder occasionally. These quantities are according to the proportions previously stated, and they answer the consumption of a day. A pot or two is also placed on the outside of the doors of the same wards in the gallery. The vapour is diffused over the whole ward, and penetrates every where, and destroys every other smell than what itself conveys. This vapour has been found by experiment destructive of the contagion of small-pox; of course it is likely to prove destructive of other contagions. It can be used with effect, without prejudice to the sick, in the manner we have described, and it is so very frequently in this Hospital. The application of it, therefore, while it destroys contagion, may also prevent its formation, and should be employed in all cases similar to those we have pointed out. It may prove useful, and we recommend its use in all situations, where a number of persons in health are confined together, as on board of transports, especially in bad weather. Two or three gallypots, with the quantities used in the Hospital, would be found sufficient, and it would not be necessary to use them oftener than twice or thrice a week. It merits a trial in marshy places, where there may be an unavoidable exposure; in these cases the gallypots with the materials should be placed in the inside of the windows and doors of the habitations next to the marshes.

"The fumigation of the clothes of infected and suspicious persons, of the wards in which patients have died with contagious diseases, and of transports, have been mentioned as a necessary precaution; the manner of which is as follows:

"Pulverized nitre 16 pounds;
Pulverized brimstone (sulphur,) 32 pounds, mixed intimately together.

"A pro-

"A proportion of this, according to the intention and size of the apartment or ship, is introduced into an iron pot, at least three times the size of the dimensions of the materials to be employed. Or it may be necessary to have several pots; but still these must be of the size, having the relative proportion to the materials as just described. The pots are placed at proper distances, taking care to keep them more in the centre than toward the sides of the apartment or ship. Previous to the introduction of the pots, the apartment or ship must be closely shut up, so as no vapour can escape; then a small piece of red hot coal, wood, or charcoal, should be thrown into each pot, immediately after which the person must retire, and secure the door or place by which he entered. Things should remain in this state at least twenty-four hours, when the pots may be taken away, and the apartment or ship cleaned, should it be required. Our fumigating-room, which is small, is allowed about six pounds of the materials; each ward about four pounds; a transport of three or four hundred tons would require six pots, each containing about eight pounds.

"The means thus concisely described will be found adequate to the purposes for which they have been recommended. The officer will perceive the very great importance of attending to them. He will see, they fall much within his own sphere of duty as well of the surgeon; he will also discern when he can enforce or support the attention of the latter. One simple criterion deserves never to be forgotten, as it will uniformly point out when all is proper, or when all is wrong. When he visits the hospital, barracks, or transports, if he becomes sensible of a peculiar, uncommon, or unpleasant smell, continuing, and affecting him with a degree of sickness or aversion, he may be satisfied, cleanliness, ventilation, and fumigation, are required. It is then his immediate duty to inquire into circumstances, direct the surgeon to assist him, and as soon as possible remedy the evil by the adoption of the means we have recommended."

We are next presented with an account of the medical management of the Royal Artillery Hospital, which appears on the whole to be judicious, and must prove beneficial. The author observes, that "the principles on which this management have [has] been conducted relate to the benefit of the patient, and the improvement of the surgeon—objects invariably in view—they are reciprocal. Unless the surgeon improves, the patient cannot obtain all the advantages he otherwise

wise would derive. We know, and we sensibly feel, that human life is too short, to acquire, even with the most suitable education, unremitting observation, accurate investigation, and unwearied reading, the information which will give the conscious mind satisfactory confidence in the unreserved treatment of the sick committed to his charge. Such is the truth.

" Therefore, in all establishments, the improvement of the profession should be held systematically in view. In the medical department of the Ordnance it is so, a general outline of which shall be given previous to the particular business of this Hospital. There is [are] a surgeon-general, surgeons, a chemist and apothecary, and assistant surgeons. The surgeons and assistant surgeons are military and civil. The former are on the establishment of the regiment, the others are resident in situations where there are civil establishments of the Ordnance, and they form a part of them. The duty of the one is confined to Woolwich, to expedition and detached services, having under their charge the artillery-men, and all others belonging to the Ordnance. The duty of the other is entirely limited to the station; but comprehends, as the other, artillery-men and the civil branch. The military surgeons detached from Woolwich have instructions, a copy of which is subjoined. The civil surgeons have also similar instructions; but those in the West India islands have an additional set, a copy of which is likewise annexed. These instructions form a systematical arrangement of procedure, and they secure equally attention and improvement.

" Medicines are supplied by a druggist, under the regulation, that each supply, before it is disposed of, must be examined by the Board's chemist and apothecary, who is resident at Woolwich.

" There are small detachments of artillery occasionally, in various situations, without a surgeon, the commanding officer of whom may make an agreement with a surgeon to take care of his men, as reasonably as possible; but he must make out his account in a particular form, as specified.

" The military surgeons who are not on detached service do duty at Woolwich; and this brings us to the medical management of the Hospital; previous to the detail of which, it may be proper to mention generally the progress of promotion. There are supernumerary and established assistant surgeons; the former undergo an examination at the College of Surgeons, and must obtain testimonials of a medical character from those with whom

whom they have studied, before they can be recommended and admitted; the latter are selected from them according to merit and seniority. The surgeons are chosen in the same manner, from the class of the established assistant surgeons. By this progress suitable qualifications are, as well as it is practicable, secured and obtained.

"Though the surgeons and assistant surgeons are attached to battalions, yet in the performance of duty they are regimental, as the battalions, especially at head quarters, have not always their own surgeon present: therefore the surgeons at Woolwich have the duty equalized according to their numbers, without regarding particular battalions, except that the surgeon present always retains his own battalion. At Woolwich there is [are] generally two and often three surgeons, besides assistant surgeons. In the Hospital the range of patients is from one hundred and ten to one hundred and sixty, or upwards. Besides these, there are women and children in considerable numbers to be daily attended to.

"Each surgeon has his division of the battalions, of course of the men in health, and takes his chance of the number of sick they may furnish. The sick are admitted into the Hospital, and arranged as nearly as possible into wards, according to the nature of their diseases; by which the surgeons may have patients in all the wards of the Hospital. No inconvenience whatever arises from this; on the contrary, it is attended with general advantages. All being open to general inspection with regard to nurses' attention, cleanliness, and qualities of diet, no sourings arise from any difference of influence or inquiry—all are alike. The surgeons attend at appointed hours in the morning, and their assistants in the evening: each surgeon has a register book and journal; the former for the daily insertion of the patients' names, diseases, period in the Hospital, diet and medicines prescribed; the latter for a detailed account of any singular case of disease, specifying the daily progress, with the manner of cure, the event or termination. Those books, when filled up, are deposited with the surgeon-general.

"The medicines are under the direction of the chemist and apothecary, and he daily superintends the dispensaries. The medicines of any power or efficacy are directly exhibited to the patients at stated times. In this way every confidence may be placed in the medicine prescribed.

"Besides the ordinary duties of the surgeons and their assistants, there is one of each who takes a weekly duty, and

who

who are constantly in the way in case of accidents; the assistant on this duty sleeps in the Hospital. The surgeon on duty reports daily to the surgeon-general on the ventilation and cleanliness of the Hospital, and the state of it altogether; and his assistant gives one of the admissions of the day, marking the diseases, and the wards into which they may be placed. This assistant also superintends once a day the electrical operations, and inserts the patients' names, with the effects of the electricity.

"Each surgeon delivers to the surgeon-general weekly a return of his sick, specifying the alterations since the last one; at the same time general consultations are held on particular cases, which may not have required them during the course of the week. In ordinary days, when any thing singular occurs, consultations take place in the morning.

"The surgeon-general gives a weekly return to the commanding officer, in detail and in abstract; a copy of the latter is preserved, and from which a general abstract of the admissions, dismissions, and deaths, has been made out for five years, commencing in January 1796, and ending 31st December 1800. This is subjoined, as it will prove a document of importance to the officer, in furnishing remarks on some of the most prevalent diseases of soldiers, and shew him how far he has it in his power, in the execution of his duty, to prevent or alleviate them.

"The surgeons examine recruits, and they are guided by the following Instruction to Army Surgeons, and which every recruiting party is also obliged to observe:

"'Surgeons are to be particularly attentive to the examination of recruits, when such are brought before them; not to suffer any man to pass, who has not, at his examination, been stripped of all his clothes, to see that he has no rupture; to ascertain, as far as possible, that he has the perfect use of his eyes and ears, and the free motion of every joint and limb; that he has no tumours nor diseased enlargement of bones or joints; no sore legs, nor marks of an old sore; that his appearance is healthy; that he is neither consumptive nor subject to fits: with any of these defects, the man is to be rejected as unfit for service.'

"The surgeons, with the surgeon-general, examine the men deemed unfit for service, a return of whom is then prepared, and the men are afterwards inspected and disposed of by the Board of Ordnance.

"Port wine is allowed to the sick by the Board; but any

other is positively prohibited. The use of it is confined to cases of necessity, and only given in such as a medicine. On recovery porter is ordered, which is furnished out of the savings in the steward's account; or otherwise by the patients. A return of the expenditure of the wine, specifying each man's name, with the disease and quantity, is sent every six months by the surgeon-general to the Board of Ordnance.

"In the Hospital a medical library has been established; it has been patronized by the master-general and Board; it is further supported by the annual contributions of the surgeon-general, surgeons, and assistants of the regiment; it already consists of six hundred volumes; it is permanent and inalienable, of course it is annually augmented. A copy of its regulations are [is] annexed. Its utility is at once apparent and unquestionable. In this library occasional meetings of the surgeons are held for medical conversation, and the consideration of cases occurring in the Hospital.

"Besides the patronage of the Board to the library, they have also granted some valuable anatomical preparations, to which are occasionally added preparations of morbid appearances occurring in the Hospital. Extraordinary cases of fatal termination are examined in the dissecting-room; an account of the dissection is registered, and any singular derangement of structure is preserved.

"From this brief account of the medical management of the Hospital, the officer will observe that it forms a system directed entirely to the benefit of the sick; for although the surgeon's improvement is not neglected, yet as that must be directed to the sick, the whole turns out ultimately to their advantage. Officers commanding ought to give surgeons their confidence, and attach all the responsibility to them for the management of their hospitals; and surely they should never interfere with their detail. The nurses and servants ought to be entirely under the direction of the surgeon, and to be answerable to him alone for their conduct, and for holding their appointments. While the surgeon is responsible to the commanding officer, the latter has it always in his power to ascertain whether his duty is regularly and assiduously performed. Should the surgeon's conduct not entitle him to confidence, it ought to be at once withdrawn: but should the officer rather wish to interfere in the detail and management of the duty, with the view of correcting the surgeon, nothing will go on right, and the sick will certainly suffer. There can be no medium between confidence and the want of it; the surgeon must

must either have the entire management of his hospital, or not. If he does not deserve it, let him be removed. But whilst he does his duty, he ought to be allowed to perform it to the best of his judgment, and there is no doubt he would give satisfaction to his commanding officer, and do justice to his patient. For a surgeon, whose mind is engrossed by his profession, can have no motives of conduct, but what will appear in kindness and in unremitting attention to his sick. Such a one will allow no pleasure, no society, to divert, interrupt, or delay any part of his duty. Should there be, however, a surgeon who has no satisfaction in his duty, but gets through with it as a toil and a vexation, and who performs it as a subordinate pursuit, any hospital or sick charge he might have, would be so conducted, as could neither secure benefit to the patient, or [nor] approbation from the commanding officer. These opposite characters are soon determined by their respective conduct, and they are drawn merely to lead the officers to judge of the value of those who may have the charge of their sick.

"OF THE CADET HOSPITAL.

"An hospital has been lately erected for the sick of the company of gentlemen cadets; the plan of which is well calculated for the purpose.

"There are only two wards for the sick; the one is larger than the other; the least is for infectious diseases. These wards, though in the same building, are yet entirely distinct, the entrance to each being by separate doors and staircases. An example is therefore furnished of a judicious arrangement for hospitals on the smallest scale.

"As this hospital is conducted on the principles of the one for the men of the regiment in every respect, no further description of it is required.

"This building was planned by Colonel Twiss of the Royal Engineers."

We subjoin the author's general account of the admissions, discharges, and deaths of patients at the Woolwich Hospital, with his practical remarks; but there appears to be a defect of some kind or other in this "*Abstract*," which we have indicated by prefixing an asterism to fifteen lines requiring explanation. From the present report it may be supposed that a greater number of patients were sometimes discharged, or had died in the Hospital, than had been previously admitted.

Abstract of Admissions, Discharges, and Deaths, in the Royal Artillery Hospital, from 1st January 1796, to 31st December 1800, being a Period of five Years.

Diseases.		Admitted.	Discharged.	Died.	Proportion of Deaths.
Fever, low, &c. — *		331	337	17	1 in 20 nearly.
—— intermittent — *		134	146	0	
—— scarlet —		13	12	3	1 in 4.
Venereals — *		1197	1221	6	1 in 203 nearly.
Gonorrhœa — *		278	297	0	
Sores — —		1788	1771	2	1 in 885 nearly.
Pectoral complaints —		874	803	51	1 in 16 nearly.
Rheumatism — *		212	223	0	
Diarrhœa —		106	93	8	1 in 12 nearly.
Sore throat —		135	129	0	
Falling sickness —		66	66	2	1 in 33.
Palsy — — *		10	11	0	
Dysentery —		15	7	4	1 in 2 nearly.
Jaundice — — *		17	20	1	1 in 20.
Sore eyes — —		22	21	0	
Fractures, simple and compound		27	25	1	1 in 25.
Amputations —		22	22	2	1 in 11.
Measles — —		41	39	2	1 in 19 nearly.
Small-pox { Natural *		25	26	11	1 in 2 nearly.
Small-pox { Inoculation *		40	41	0	
Abscess — —		49	45	3	1 in 15.
Piles and fistula — *		15	17	1	1 in 17.
Dropsy — —		14	13	5	1 in 3 nearly.
Cholera — —		26	21	0	
St. Anthony's fire —		3	3	0	
Insane — —		6	3	1	
Pleurisy — —		8	7	2	1 in 3 nearly.
Hepatitis — — *		4	7	0	
Peripneumony —		2	0	0	
Diabetes — —		1	0	0	
Spitting of blood —		1	0	1	
Stone — — *		0	0	1	
Wound by cannon shot		1	0	1	
Gangrene — *		0	0	2	
Effects of arsenic — *		0	0	1	
Ruptured spleen —		1	0	1	
King's evil, white swelling, &c.		7	4	4	
Miscellaneous, as itch, &c. *		1985	2005	0	
Total		7526	7435	133	1 in 56 nearly.

"*Remarks.*—This abstract shews the great number of patients admitted into this Hospital, with the nature of their diseases and the proportions of deaths.

"When it is considered that we have sick from every quarter where there are artillery soldiers, as well as from the garrison at Woolwich, and that the former are men worn out by disease or service, the proportion of our deaths has not been great; especially when it is observed, that the greatest mortality, to the amount of more than one third of the whole, falls under pectoral complaints, which comprehends [comprehend] consumption, one of the most fatal diseases, when formed, which is known.

"The most predominant and fatal diseases among our soldiers appear to be fevers, pectoral complaints, and small-pox; others are prevalent, but not fatal, as sores, venereals.

"Fevers are generally in this country of the contagious kind; and, from their fatality, the prevention of them, and the checking of communication, deserve every attention from the officer.

"Many of the fevers specified here were from the Continent, as well as the diarrhœas and dysenteries, though some of the latter were from the West Indies; which accounts for the mortality, as the diseases had been of long continuance and the constitution exhausted.

"Pectoral complaints are extremely frequent, and when they terminate in consumption may be said to be incurable; they are very insidious in their attack and progress; they often begin by a slight cold, then a little cough, with which they go on until a confirmed lung disease is produced. Officers should, therefore, direct the non-commissioned officers to be on the watch, and whenever men are observed to have coughs they ought to be reported to their surgeon. Pectoral complaints are not unfrequently occasioned by a course of mercury; to this cause we have often traced consumption. When the venereal disease has been treated by the new remedies, no such effect has followed. The six men who died with the venereal disease were men worn out by mercury, and some of them had come to this Hospital from a distance. The others were destroyed by a species of phagedenic ulcer, the effect of mercury and the venereal disease, in probably a peculiar constitution.

"The new remedies of themselves, or alternately exhibited with small doses of mercury, are better calculated for the safe and effectual removal of the venereal affections of soldiers, than

than any other means of treatment hitherto adopted. They form no new disease or morbid combination; the constitution is left unimpaired; while the disease is not so liable to re-appear in any of its secondary forms. Our practice in this disease has now been of three years duration, and we thus give the result.

"Of twenty-seven instances of simple and compound fractures, with twenty-two cases of amputation, one of whom was a man who had both legs shattered by the explosion of a gun, which were obliged to be immediately amputated (he recovered,) only three died; a practice so successful, that no hospital can produce its equal, except those under the same circumstances. We attribute it entirely to the cleanliness, ventilation, and smallness of the wards. In bad cases of this kind a patient has a separate ward. This success, and the cause of it, has been acknowledged by several surgeons of the London hospitals.

"Nothing can point out more strongly the necessity of inoculation than the fatality of the small-pox. The cow-pox is now introduced under the most favourable auspices, and is likely to supersede the other. We inoculate with it at Woolwich, and with every success hitherto."

The present work concludes with "some observations on the management of artillery soldiers, under the most remarkable causes of the diseases to which they are liable to be exposed."

We cannot allow ourselves to conclude this article without noticing the frequent solecisms, grammatical errors, and unpolished sentences, which appear in Dr. Rollo's publication.

ART. III. *Outlines of a Course of Lectures on Chemistry: delivered at the Royal Institution of Great Britain* 1801. Octavo. 213 pages. CADELL and DAVIES, London. Price 5*s*.

THE necessity for assisting the memory and arranging the ideas of the student, who receives his instruction from the voice and the experiments of a public instructor, is so strongly felt and universally acknowledged, that it is generally the first task which the lecturer imposes on himself, to arrange a methodical syllabus, or outline of the track which he means to follow.

Such a performance can seldom be considered in any other light than a necessary task; and if it be performed with precision and method, and present to the student the most important

portant facts in a sufficiently prominent point of view, the instructor will have deserved well of his audience.

Dr. Garnet, the author of the work before us, announces it as an Outline of the Course which is actually delivering at the excellent Institution we have lately seen established in this metropolis; and from the known character of the Professor, and the abundant means of information afforded by his situation, we may fairly expect to find a sketch of all the facts and opinions concerning the science of chemistry down to the present day, which are acknowledged by the most eminent authorities, and received by them as authentic and well established.

This work is divided into thirty sections, corresponding with as many lectures; which number seems, therefore, to be the extent of the course, a limitation that renders a strict selection of the most interesting matter absolutely necessary.

The first lecture comprises the history of chemistry, and a slight view of the various arts to which it is usefully applied; and the reader may probably acquiesce in the opinion of the author, that the way in which the golden calf was rendered potable to the Israelites by Moses, was not by a previous solution in liver of sulphur, but only by being ground to powder, and thus suspended in water.

The second lecture contains, in a few words, the most important of the laws which regulate chemical affinity, well selected from the full but prolix view of the subject given by Fourcroy.

The Professor devotes the next five lectures to the highly important and complicated subject of heat and light; and though this proportion is no less than a sixth part of the whole course, we believe that the philosophical chemist will scarcely think too much stress has been laid upon this branch of inquiry, which has long exercised, and is still exercising the genius and skill of some of the acutest natural philosophers of which science can boast. The order in which Dr. G. considers the various parts of this subject is, first, the expansion produced by heat, and the construction of thermometers, (which last, indeed, occupies a whole lecture;) then, the conducting power of different bodies; and concludes with the phenomena of latent heat, an explanation of the effect of freezing mixtures, evaporation, &c.

We find that the non-conducting power of fluids, discovered and elucidated by Count Rumford, is admitted by Dr. G. in the most unequivocal manner.

The

The laws of chemical affinity recapitulated, a very succinct account of chemical apparatus, and other preliminary matter, occupy the eighth and ninth lectures. With the tenth, the Professor begins the subject of oxygen, which leads him directly to the production of metallic oxyds and the theory of combustion. The analogous process of respiration, together with a considerable deviation from chemistry to the laws of animal irritability and the Brunonian system, conclude the twelfth lecture. Hydrogen and the formation of water follow; and to this succeeds azote, which Dr. G. with some of the French chemists, considers pretty decidedly as to the principle of alkalescency in the fixed as well as the volatile alkalies. Pursuing this opinion, he here adds the account of all the alkalies and alkaline carbonates. Then, taking up the oxygenation of azote, he proceeds to the subject of nitric acid in every state, and the nitrated earths and alkalies. The four succeeding lectures are employed with the most important acids, their bases, and the neutral, alkaline, and earthy salts which they form; they are, the carbonic, sulphuric, phosphoric, and muriatic acids. The vegetable and other remaining acids occupy the twentieth lecture. The earths and metals follow next, in the order in which Fourcroy takes them. The newly-discovered glacine among the former, and chrome among the latter, have their place assigned them. The vegetable and the animal principles each occupy only a single lecture; and the twenty-seventh concludes the regular series with an account of manures and the theory of vegetation. The three remaining lectures are devoted to as many subjects, belonging particularly to technical chemistry, namely, bleaching, dyeing, and the analysis of mineral waters.

Such is the plan of the volume before us. It is not our present object to make any comment on the proportional share of notice which Dr. G. has thought it expedient to allot to the various branches of the fertile subject before his consideration in the lecture-room; but a few words may be said on the composition of this small volume, which, when presented to the public at large, will be expected to be an accurate though unfinished sketch of chemical knowledge intended for the closet as well as the theatre.

We can say, that the selection of matter is in general very well performed; that is, allowing a certain number of pages or lines to be devoted to a particular subject, the most prominent parts and illustrative properties of the matter under consideration have alone been given.

A few omissions might be pointed out: — for example, no mention is made of the striking property of strontian and barytes to crystallize from their solutions when perfectly pure; not the least notice is taken of the process of cupellation to purify the very difficultly oxydable or perfect metals; and in the analysis of mineral waters, the application of reagents with a view of ascertaining the quantity of any ingredient by precipitation and subsequent estimation from known proportions, as particularly enlarged upon by Kirwan, is scarcely alluded to.

The authorities which the author refers to at the end of each chapter, are such as are universally acknowledged as the most respectable and the safest to follow; and his language is clear, elegant, and as perspicuous as the nature and extent of his subject will admit. The reader may constantly recognise the very words of the elementary works which are to be found in the library of every student; but where originality of matter is not pretended to, it might perhaps be thought too fastidious to expect it in the author's language.

As a specimen of the work we shall copy Dr. Garnett's thirteenth lecture.

"Hydrogen, combined with caloric, forms hydrogen gas. This substance, which was formerly called inflammable air, was discovered by Mr. Cavendish in the year 1767. Its base is called hydrogen, because it is one of the component parts, or, more properly, the base of water. It may be procured from several substances, of which it forms a constituent part, but is obtained in the most pure state from the decomposition of water by means of metals.

"Metallic substances will not decompose water while cold, unless assisted by an acid, in which case the water is very readily decomposed; its oxygen oxydating the metal, and the hydrogen flying off in the form of gas.

"M. Lavoisier has proved, that when eighty-five parts of oxygen gas are burned with fifteen of hydrogen gas, both gases vanish, and one hundred parts of water are formed; and if one hundred parts of water are made to pass through a red-hot iron tube, fifteen parts of hydrogen gas will be procured, while the inside of the tube will be found converted into oxyd, and to to have gained eighty-five parts in weight.

"Hydrogen gas is combustible in an eminent degree; yet it will not burn, unless in contact with oxygen, and not even then without the application of a red heat. When pure, and in contact with atmospheric air, it burns with a lambent

flame. It burns rapidly when intimately mixed with atmospheric air, in such a manner that each particle of hydrogen gas may be surrounded by particles of atmospheric air. Fireworks, without smoke or noise, are made by means of hydrogen gas. It is about twelve times lighter than common air, and on this property depends [depend] the principles of aërostation. Charcoal, when ignited, will decompose water; but the hydrogen gas procured in this manner is never pure, being always mixed with carbonic acid gas. These gases, though possessed of very different specific gravities, do not easily separate from each other, but form, by the attraction of their particles, a compound elastic fluid called hydrocarbonic gas. It is this aëriform fluid which floats frequently on marshes, and being set on fire by electricity, or other means, gives rise to the ignis fatuus.

"Hydrogen gas is improper for respiration; an animal immersed in it is killed in the same manner as when immersed in azotic gas. This, however, does not seem to depend upon any positive noxious quality which this gas possesses, but merely on its excluding oxygen gas. When hydrogen gas is mixed with about one third of its quantity of oxygen gas, it may be breathed without inconvenience.

"Hydrogen gas is frequently found in great abundance in coal-mines, where it is sometimes generated suddenly, and becomes mixed with the atmospheric air of these subterraneous cavities. If a lighted candle be brought in, this mixture often explodes in the most violent manner. It is called by miners the fire-damp. Methods have, however, been contrived to prevent its dreadful effects.

"Hydrogen gas is capable of dissolving some combustible bodies, particularly sulphur and phosphorus; and when united to these, it seems to acquire new properties: when united to sulphur it forms sulphurated hydrogen gas, or that fluid which is contained in considerable quantity in sulphurous mineral waters: this gas blackens metallic substances; is very soluble in water; is unfit for respiration; and turns vegetable blues green; it burns with a blue flame, depositing sulphur.

"The union of hydrogen gas and phosphorus is called phosphorated hydrogen gas. This elastic fluid has a very fetid smell, is improper for respiration, and takes fire spontaneously on coming in contact with the air, accompanied with an explosion and a beautiful ring of dense smoke. It is probably to a disengagement of gas of this kind, that we ought to attribute

bute the ignes fatui which play about burying-grounds, and in general about places where animals are putrefying.

"There is, probably, a stratum of hydrogen gas in the superior regions of the atmosphere, the union of which with oxygen will form water, and may produce meteors.

"*See Cavendish's Exper.—Phil. Trans.* 1766.—*Priestley's Exper.—Lavoisier's Elements of Chemistry.—Chaptal.—Fourcroy.—La Grange.—Scheele on Fire.—Kirwan on Phlogiston.*"

ART. IV. *Systéme des Connaissances chimiques, et de leurs Applications aux Phénomènes de la Nature et de l'Art.* Par A. F. FOURCROY. Dix Tomes, 8vo. (4to. edition, cinq Tomes.) Paris, An IX.

WITHIN these few years many systematic treatises of chemistry have been published in Germany, in France, and in England; yet so rapid is the progress of this branch of experimental knowledge, so numerous are the discoveries which are daily made in it*, that a new conspectus of the facts and principles established in it was wanting. Besides, the treatises here alluded to are chiefly elementary: compared with them, how vast appears the plan, how scientific the arrangement of the present performance!—in the collection of the materials for which, the author has been employed almost incessantly for a period of twenty-five years; and in reducing that mass of materials into the present form, his time has been taken up ever since the year 1793. By various memoirs printed in the Transactions of the Academie des Sciences, in those of the Société de Médecine, in the Annales de Chimie, in a periodical work entitled La Médecine éclairée; by his Elemens de Chimie et d'Histoire Naturelle, and by his Philosophie chimique, Fourcroy had long ago attained to a high rank among modern chemists; but the present work greatly eclipses all his former labours, and secures to him the first place among the systematic writers on chemical science.

To enter into a complete analysis of this work, which contains so many things that have no immediate relation to the art of physic, would be foreign to our plan; but it will, no

* Within the last twenty years, the number of salts, which before did not exceed thirty, has been augmented to one hundred and thirty-four. This will serve to convey some idea of the rapid progress of chemistry.

doubt, be acceptable to all our readers to have a general view of the author's arrangement, with some extracts from that part which treats of animal chemistry. The author divides his work into eight sections, viz.

1st section. The fundamentals of chemical science; generalities; and introduction.

2nd. Of simple or undecompounded bodies.

3rd. Of burnt bodies, oxyds, or acids.

4th. Of earthy or alkaline salifiable bases.

5th. Of acids united to salifiable bases, or of earthy and alkaline salts.

6th. Of metals in particular.

7th. Of organic vegetable compounds.

8th. Of organic animal compounds.

It is a received opinion that the Egyptians were the first chemists, and that the Greeks and Romans were not unacquainted with this branch of science; but, in the Preliminary Discourse and Historical Sketch, our author strips chemistry of its pretended antiquity, and represents it as the offspring of modern times. That the ancient inhabitants of Egypt knew how to fuse some metals, and to perform a few other common processes of art, he does not deny; but he denies that they or any of the ancients knew any thing of chemistry as a science. It was not until the times of the Arabs, that chemistry, under the name of pharmacy, made any approaches to a science. It was taken out of the hands of the pharmaceutical operators, and advanced and improved by Boyle, Stahl, and Boerhaave; but it was not until the year 1757, that, under the genius of Black, the beginning was made of those discoveries which have since led to the establishment of general principles and accurate views of the subject; and have given to chemistry what it wanted before, the form and dignity of a science.

Black's detection of what he termed fixed air (of which his predecessor Hales had only some imperfect notions) in the mild calcareous earth, and in the mild alkalies; and his consequent theory of causticity, paved the way for Lavoisier's brilliant discoveries, and for that grand revolution which he effected in this science. The pneumatic doctrine is now universally acknowledged; and is only the better established for all the opposition it has received. Alas! that we should have to regret the cruel and untimely fate of its author! Lavoisier, that Newton in chemical philosophy, Lavoisier fell a victim in the meridian of his fame, to the ravages of political contention!

Besides

Besides the Preliminary Discourse and Historical Sketch (from which we have made the preceding extracts) the first volume comprises also the second section, which treats of simple bodies. The second volume comprises the third and fourth sections, which treat of burnt bodies, oxyds or acids, and of alkaline and earthy salifiable bases. In the list of earths here given stand the following: Silica, alumina, zirconia, glucina, magnesia, lime. In this list the reader would naturally expect to find the barytic and strontian earths; but Mr. Fourcroy has classed them with the alkalies, for reasons not quite satisfactory to us. In the Preliminary Discourse, p. lxxix. he announces, that a new earth has been discovered by Mr. Gadolin, and the account of it made known since the impression of the other part of his work. This new earth is called by its discoverer yttria, from Ytterby, the name of a place in Sweden where the stone from which the earth is obtained is found; Mr. Fourcroy terms it more properly gadolinite. The stone containing this earth has been since analysed by Mr. Ekberg and Mr. Vauquelin: according to the last-mentioned chemist, one hundred parts of this fossil yield, of

Silica	25	
Oxyd of iron	25	
New earth, or yttria	35	
Oxyd of manganese	2	
Lime	2	
Loss	11	in carbonic acid and water.

This new species of earth (yttria or gadolinite) in many respects resembles the glucina; but it is distinguished from this last, as well as from alumina, by not being soluble in the caustic fixed alkalies. It further differs from the glucina, in forming, with the oxalic acid, a salt of little solubility; whereas the oxalate of glucina is very soluble. Moreover, the prussiate of potash, which does not precipitate the solutions of oxalated glucina, throws down a precipitate when added to the solutions of oxalated yttria.

The list of alkalies stands thus: Baryt, potash, soda, strontia, ammonia.

In the mineralogical arrangement and nomenclature, our author has followed Mr. Haüy, who has admitted forty-five species of compound earthy substances or stones.

The third and fourth volumes treat of the fifth section; viz. Of acids united to salifiable bases, or of earthy and alkaline

salts. Of these our author has described one hundred and thirty-five different species. The latter part of the fourth volume relates to mineral waters, of which he makes four classes, viz.

1. Acidulous waters.
2. Saline waters.
3. Sulphureous waters.
4. Ferruginous waters.

After describing the methods of examining and analysing mineral waters, he subjoins, from Bergman, an account of their artificial composition.

The sixth section, which comprises the metals, occupies the fifth and sixth volumes. His classification of these bodies is new and ingenious. His classes are founded on the relative degrees of acidification, oxydation, and ductility. According to this view of the subject, the twenty-one known metallic bodies are arranged into the five following classes:

1st Class. Comprehending brittle and acidifiable metals, or such as are susceptible of assuming the character of acids by combination with a greater or less proportion of oxygen:

Arsenic,	Molybdæna,
Tungsten,	Chromum.

2nd. Comprehending metals that are brittle like the former, but not acidifiable, like them:

Titanium,	Manganese,
Uranium,	Bismuth,
Cobalt,	Antimony,
Nickel,	Tellurium.

3rd. Comprising metals simply oxydable like the last, but differing from them by a beginning of ductility. [By congelation, quicksilver becomes to a certain degree malleable.]

Quicksilver,	Zinc.

4th. Metals that are very ductile and easily oxydated:

Tin,	Iron,
Lead,	Copper.

5th. Metals that are exceedingly ductile, but with difficulty oxydable:

Silver,	Platina.
Gold,	

The seventh and eighth volumes are occupied in treating of the seventh section, which relates to organic vegetable compounds.

The ninth and tenth volumes treat of the eighth and last section,

section, viz. of organic animal compounds. From this section we shall lay before our readers some extracts in our next number.

ART. V. *A Letter to Dr. Percival, on the Prevention of infectious Fevers; and an Address to the College of Physicians at Philadelphia, on the Prevention of the American Pestilence.* Read to the Literary and Philosophical Society of Bath, by JOHN HAYGARTH, M.D. F.R.S. Lond. F.R.S. and R.M.S. Edinb. and Member of the American Academy of Arts and Sciences. Octavo. 188 pages. CADELL and DAVIES, London. 1801. Price 3*s.* 6*d.*

ALTHOUGH the subject of contagion has long occupied the attention of accurate and intelligent observers, by whom numerous interesting circumstances in its history have been noticed and recorded; there are yet many points of importance relating to it which require to be illustrated. To communicate facts for the elucidation of these points is the object of the present publication; and the facts are stated not for the purpose of supporting, as some other great men have done, a wild and fantastical hypothesis, but of demonstrating that the laws which regulate the communication of febrile contagion are such, that a large proportion of the miseries hitherto inflicted by it upon mankind, may with certainty, and without much difficulty, be prevented.

This letter is divided into two parts; the first comprehending preliminary principles, the second the practical conclusions deduced from them. The author begins with congratulating Dr. Percival on the final and complete triumph of truth and humanity evinced in the success of the measures adopted for the prevention of the infectious fever which had long and fatally prevailed at Manchester. These measures were pursued after repeated exhortations and importunities on the part of Dr. Haygarth, who, having for many years witnessed their efficacy at Chester, was enabled to confirm his recommendation of them by an appeal to well-authenticated facts and long experience; and he thinks that the difficulties which at the outset were opposed to their adoption, will in the end be highly beneficial. The contest relative to this transaction occasioned many interesting facts to be noticed and recorded; and the public attention was so generally excited, that the subject "attracted the observation not only of physicians, but of

of other leading characters in society who are most eminent for their knowledge and beneficence."

Dr. Haygarth had long been of opinion that much advantage would result from an investigation of the nature of febrile contagion, for the purpose of ascertaining the laws by which it is communicated and the means by which it may be prevented. He was convinced that the extensive calamities which it occasions proceed from error and ignorance, rather than from the inevitable danger of the distemper. In 1774, therefore, he instituted an inquiry on the subject, and communicated the result to the public in a paper "on the Population and Diseases of Chester, which was reprinted in the Philosophical Transactions in 1775," and in which "the original idea of checking the progress of infectious fevers among the poor is fully and explicitly proposed in the following words:

" 'Another reason of mortality in the suburbs of Chester 'seems to be, that their inhabitants in general are of the 'lowest rank; they want most of the conveniencies and com-'forts of life; their houses are small, close, crowded, and 'dirty.'—'In these poor habitations, when one person is 'seized with a fever, others of the family are generally affected 'with the same fever, in a greater or less degree.

" 'If a regulation could be universally adopted, of imme-'diately removing out of the family such of the poor people 'as are seized with fevers, it is evident that the most salutary 'consequences would follow. Reasonable objections might be 'made to receive such patients into the general Infirmary, 'even into separate wards, lest the infection should spread 'through the whole house. But might not this and every 'other objection be obviated, by erecting on the ground which 'adjoins and belongs to the Infirmary, a small building to be 'divided into spacious airy apartments, where patients infected 'with fevers, and properly recommended, might be received 'on any day of the week? Besides medical assistance, they 'would here enjoy clean linen, airy rooms, careful attendance, 'and wholesome diet'."

Some time afterwards, however, Dr. Haygarth ascertained by clinical observations on the variolous and febrile infections, that the former is not propagated at a greater distance than half a yard, and that the contagion of fevers is confined to a much narrower sphere; he therefore relinquished the idea of a distinct building, satisfied of the wisdom and safety of admitting fever patients into separate wards of the Chester Infirmary itself.

After

After briefly describing the usual course and symptoms of the typhus or common contagious fever, to which his observations refer, Dr. Haygarth proceeds to inquire into the laws which regulate the communication of febrile infection; both as to the period during which the infection remains in a latent state, that is, the interval of time which elapses between the patient's exposure to the pestilential influence, and the commencement of the fever; and as to the proportion of persons who are susceptible of the infection. The cases which could be ascertained with sufficient correctness to lead to conclusions on these points are distinctly exhibited in a synoptical view.

The result with respect to the first point is, that "of seventy-two cases the typhus was less than ten days in only five, or probably in only three cases; that it was less than seventeen days in only eleven or thirteen; that it fell upon some of the days between the seventeenth and thirty-third day in forty-one, which is considerably more than half the cases." Of the remaining cases, one is said to have occurred on the thirty-eighth day, one on the fortieth, four between the fortieth and fiftieth, six between the fiftieth and sixtieth, one on the sixty-fourth, and one on the seventy-second day after exposure.

We think, however, that the statements on this point, especially where very long periods are assigned, should be received with some degree of caution; for in those cases where a person is exposed to the contagion for a considerable number of days, it is impossible to determine whether the infectious dose of the poison was received on the first, or the last, or some intermediate day. In the case, for instance, in which the fever is said to have commenced on the seventy-second day after exposure, the cottage of the patient was not free from contagion from the 12th of June to the 26th of August, the day of his own attack; for three different members of his family were seized in succession, on the 12th of June, the 5th of July, and the 1st of August, respectively. Is it not, therefore, probable that from some unknown circumstance he was not susceptible of infection during the illness of the first, but received a sufficient dose of poison from one of the two last? We offer this remark to Dr. Haygarth's consideration, in perfect confidence that his candour will lead him to attend to any suggestion which may guard him against drawing a fallacious inference.

As to the second point, the proportion of persons susceptible of infection, it appears, that of one hundred and sixty-eight

eight persons fully exposed to it, five only remained uninfected, or less than one in thirty-three; so that at least "as many persons are liable to receive the typhous as the variolous contagion, and probably more, even if the persons who have had the small-pox be excluded from the comparison; and, in a far greater number, if we take into consideration that the latter distemper can only be suffered once, but the former an indefinite number of times." It may hence be reasonably concluded, that when "persons have breathed the air of a chamber of a patient ill of a contagious fever, and yet have escaped infection, such persons have not been exposed to an infectious dose of the poison."

Upon these principles Dr. Haygarth endeavours to ascertain what dose of the typhous poison is required to produce infection. He adverts to an established medical truth, that the larger the dose of a poison or drug, the greater in general is the effect which it produces: and observing that typhus is not infectious in a clean, large, and airy room; and that even in small, close, and dirty apartments, the most pestilential air in the most concentrated state is sometimes respired without producing fever; he concludes that "air strongly impregnated with infectious miasms may be breathed for a short time, and air weakly impregnated for a long time, without any injury;" and he expresses a belief, that in some persons "the poisonous miasms do not generate a fever, till they have been respired without interruption, for several days together."

Dr. Haygarth next notices the opinion, that medical men are less liable to be affected with infectious poison than others, because they are more frequently accustomed to breathe a certain portion of it; this, he thinks, is not warranted by the analogy of other poisons; "opium," for example, "perhaps more than any other medicine requires a gradually increasing dose, to produce the same effect. But, if opiates are omitted, even for a short interval, the patient, on the recommencement of their use, perceives the ordinary effect from the ordinary quantity. Whereas medical men are never constantly in the habit of breathing pestilential air, nor is the dose of it gradually increased. Consequently, after a short interval of time, during which they cease to breathe poisonous miasms, they become as susceptible of mischief from the poison as any other person." But those confined in the pestilential vapours of a jail are in a very different situation: they have probably respired a quantity of the poison gradually increased, so that

they

they can bear with impunity a dose sufficiently large to affect those who are unaccustomed to it.

The author is of opinion that the typhous poison is infectious at a greater distance in air which has been vitiated by respiration; and to this cause he ascribes some events which might otherwise seem to be exceptions to his previous observations. One of these is the communication of fevers in a spacious court of justice, at a greater distance from the poison than has been stated as the uniform result of his own observations. It may indeed be supposed, that this mischief is owing "to the increase of malignity in the febrile poison when it has long lodged and putrified in dirty clothes and confined air in a state usually denominated fomites:" but it is probable that this is not the cause; for in the Edinburgh Infirmary, where the strictest attention to cleanliness is observed, the infection is sometimes communicated to the students, when they are very numerous, and the air of the wards consequently much vitiated by their respiration; so that, upon the whole, Dr. Haygarth is satisfied, that febrile infection extends but to a very narrow sphere from the poison; and it was on this solid foundation that he originally proposed the establishment of fever-wards in the Chester Infirmary.

Dr. Haygarth next examines a question of considerable importance, namely, whether the clothes of medical and other visitors, exposed to febrile miasms, can acquire a pestilential quality, so as to communicate infection. This he answers decidedly in the negative, and refers to his publications on the small-pox for the reasons on which his opinion is founded. He conceives that the febrile miasms are not merely diffused in air, but chemically united to it, and therefore if they are attracted from air by clothes, they cannot on any known principle be attracted from clothes by air. A powerful objection to this reasoning, in our opinion, is, that it would prove too much, because it tends to shew that no danger is to be apprehended from fomites; a position which is contradicted by every day's experience, and which we cannot think it was Dr. Haygarth's intention to advance or maintain. It is perfectly consistent with the facts ascertained on the subject, to suppose, that although clothes, exposed for a short time to air impregnated with infectious particles, may not be so much contaminated as to be capable of afterwards communicating infection, yet they may, by a longer and more complete exposure, become fomites of contagion. That they do so, is, as we have before said, a matter of daily observation, and

perhaps their effect can only be explained on the supposition that they are merely diffused, and not dissolved in the air.

Dr. Haygarth proceeds to animadvert on a doctrine delivered in the lectures of a late celebrated professor (Dr. Cullen, we suppose,) which he considers as very erroneous and dangerous. It teaches that contagions diffused in the atmosphere, and at a distance from their source, become harmless, and that "this is similar to vapours of fermenting liquors, and of fire, which, near to their source, are destructive of animal life, but at a small distance become innocent, either by mixture or diffusion." This doctrine accords so exactly with that which it is the object of Dr. Haygarth's publication to inculcate, that we are somewhat surprised at the vehemence with which he condemns it. As the same circumstance which renders the febrile poison inert, diffusion in the atmosphere, is also that which alone renders harmless the exhalations from fermenting liquors, we cannot help thinking the analogy sufficiently close to warrant its being adduced as an almost "literal illustration of the nature of contagion."

"In an investigation of the nature of typhous contagion, it is necessary to inquire how early after its commencement the fever becomes infectious;" and to ascertain this point, Dr. Haygarth had collected some important facts: by an unfortunate accident, however, the papers recording them were destroyed. He mentions one case, which seems to prove satisfactorily that fever becomes infectious in four days at farthest from its commencement. A man was taken out of his own house into the Chester Infirmary on the fifth day of his fever, but his wife and children had all caught the infection before his departure.

The second part of the letter consists of six very important practical conclusions, the first of which is, that "Medical, clerical, and other visitors of patients in infectious fevers, may fully perform their important duties with safety to themselves." This proposition is illustrated by rules for preventing the communication of infectious fever, which direct the constant admission of fresh air into the sick room, strict attention to cleanliness in every respect, and avoiding currents of air impregnated with the patient's breath, or with the exhalations from his body or excrements. These rules are prefaced by the observation, that the "febrile poison in a small, close, and dirty room, infects a very great proportion of mankind, (not less than twenty-two out of twenty-three, or a still higher proportion;) but in a large, airy, clean apartment, even putrid

fevers

fevers are seldom or never infectious, because when this poisonous vapour is much diluted with fresh air it is not noxious."

From this obviously results the second conclusion: "In any house, with spacious apartments, the whole family, even the nurses of a patient ill of a typhous fever, may be preserved from infection."

The third practical conclusion is, that "Schools may be preserved from febrile infection." This is illustrated by a very satisfactory example. A young gentleman was attacked in a dangerous degree with a scarlet fever and sore throat in a school at Chester, where there were thirty-seven boarders, most of whom, it is highly probable, were disposed to receive this dangerous contagion. His chamber was situated in the middle of the house, and all the scholars went close past his door several times a day; but by a rigid and faithful observance of the "Rules of prevention," though all remained in the house during the whole disease, yet not one of them was infected.

These regulations, Dr. Haygarth thinks, are strictly applicable to nurseries, by removing from which into a separate apartment the first child affected with any fever, the contagion may be prevented from spreading through the family.

Dr. Haygarth's fourth conclusion is, that "In an hospital, infectious fevers ought never to be admitted into the same wards with patients ill of other diseases." This position is supported by very simple, and, in our opinion, conclusive reasoning. "The Manchester and Liverpool infirmaries, from their first institution, have strictly prohibited the admission of fever patients; yet into both of them the typhous contagion was inadvertently received, and it spread in so alarming a degree, that the patients were taken out of the wards, in order that they might receive a thorough purification. If such pernicious effects were produced in infirmaries, which were protected by such judicious regulations, what fatal consequences may be justly apprehended in other hospitals where infectious fevers are indiscriminately admitted?"

The number of physicians to hospitals in London who have fallen victims to malignant fevers, in consequence of the practice of admitting them promiscuously with other diseases, is mentioned as an additional proof of the danger and impropriety of it; besides, in "the Chester Infirmary, only one in twenty-six dies of all the patients who are admitted;" but "the fatality appears to be double this proportion in hospitals

where patients ill of infectious fevers are indiscriminately received."

The fifth practical conclusion is highly important: "When an infectious fever is in a small house, the family cannot be preserved from it unless the patients are removed into a separate building." With the consideration of this position is connected the whole subject of fever-wards, and the commentary upon it contains an account of their establishment at Chester, and of the House of Recovery at Manchester. Dr. Haygarth had, in his former correspondence with Dr. Percival, "uniformly and strenuously objected to the measures by which it was attempted to check the progress of the epidemical fever" at the latter place. What these measures were, we are not distinctly informed; but it is plain that Dr. Haygarth predicted their failure, because they did not comprehend the removal of poor patients, ill of fevers, out of their small, close, and dirty dwellings, into spacious, airy, and clean apartments.

All this inquiry was instituted before Dr. Carmichael Smyth's recommendation of the vapour of nitrous acid, as destructive of pestilential contagion. Of this Dr. Haygarth has had no opportunity to make a trial, but leaves to others to determine, from the facts which he states, what efficacy it possesses superior to the method of purification, which solely depends upon cleanliness and fresh air. We cannot suppose, that in situations where ventilation and cleanliness can be employed, any judicious practitioner would hesitate which method to prefer.

The account of the fever-wards at Chester is extremely interesting and satisfactory. They are situated on the same floor with a ward containing other patients, and communicate with it by a passage and doors frequently open; yet it was never suspected, that the patients in other parts of the house caught any infection from the fever-wards by any contamination of the atmosphere; nor from any transgression of the Rules of Prevention, which require ventilation, cleanliness, and separation, and may be seen in Howard's Account of Lazarettos, p. 209. During a period of fourteen years and a half from their establishment, there were only four instances of infection communicated in these wards; the persons infected were nurses, who, Dr. Haygarth thinks, exposed themselves more than was either necessary or useful. The rules for the fever-wards, which were adopted to prevent the infection of other patients

in

in the Infirmary, are here given at length, and appear admirably calculated to attain the end proposed.

The astonishing good effects of the House of Recovery at Manchester are related by our author, and "clearly prove, beyond all controversy, what are the beneficial effects of the practical regulations deduced from the principles explained in this Letter."

Dr. Haygarth suggests a doubt, whether typhous fevers, like the small-pox, are always produced by a specific contagion; or, on the contrary, are also generated by close, dirty, crowded rooms, or by certain seasons, and other causes: but does not enter into the discussion of the question, not having obtained sufficient evidence on the subject. He, however, warmly commends the attempt to exterminate the contagion; expresses his decided approbation of the regulations adopted with that view at Manchester; and thinks that the benefits of such institutions might be extended to the metropolis with still greater certainty of success. Dr. Haygarth advises, that the hospitals in different parts of London should open spacious wards for receiving fever-patients; and mentions his hope, founded on the information of Dr. Saunders and Dr. W. Heberden, that Guy's and St. George's hospitals will shortly appropriate wards to this purpose. "It is not improbable," Dr. Haygarth remarks, "that in some of the London hospitals (as at Chester) the attic stories may be empty, and may be appropriated to the reception of infectious fevers. Upon this subject I have had an interesting conversation with the three * earliest and most zealous proposers of the 'Society for 'promoting the Comforts and bettering the Condition of the 'Poor.' And you, I know, will agree with me, that regulations to prevent contagious fevers will answer these purposes in a more eminent degree than any other benefit which it is in the power of the rich to bestow."

We are happy to observe, that the truly enlightened and benevolent members of this Society have directed their attention to the subject; and have not only printed and distributed a pamphlet relating to it, (which we have noticed in a former number of this volume, p. 41,) but have convened a meeting, and entered into a liberal subscription for the purpose of carrying the necessary measures into effect.

After declaring his opinion, that the *Pestis* of Livy, which

* William Morton Pitt, Esq. M. P. William Wilberforce, Esq. M. P. and Thomas Bernard, Esq.

he

he so often mentions in his History, as fatal to the citizens of Rome; and the *Plague*, which always constituted an article in the London bills of mortality, till the extensive destruction of the latter city by fire, in 1666, were probably no other than typhous fevers; Dr. Haygarth mentions the expectations which he entertains, that fever-wards will soon be established at Liverpool, at Norwich, and at Bath. "These speculations," he adds, "lead to an enlarged prospect of general beneficence. In most of the principal towns in Britain, there exists an infirmary supported by voluntary contributions. In many of them will probably be found two vacant wards in the attic story, which might be appropriated to the reception of fevers, without abridging the conveniences of the other patients. At any rate, an additional building, to consist of two wards, a laundry, and a bedroom for a nurse, might be constructed at a very moderate expense. You will not think these expectations too sanguine when we consider the active beneficence of our medical brethren, and the zeal with which they offer their gratuitous services to the poor. The rich bounteously subscribe for the relief of the distressed part of the community, when afflicted with diseases which cannot personally be injurious to themselves. The motive of self-preservation will be added to that of general humanity, to support measures for the extermination of an infectious fever, which, by many unavoidable accidents, might bring this malignant poison into their own families."

The remaining part of this interesting and valuable work contains an application of the author's principles to fevers in the army and navy, and to the American pestilence. As these subjects are too important to be hastily passed over, we are under the necessity of deferring the consideration of them until our next Number.

ART. VI. *A Description of the Arteries of the human Body, reduced into the Form of Tables.* By ADOLPHUS MURRAY, M.D. Professor of Anatomy and Surgery at Upsal. Translated from the Latin under the Inspection of JAMES MACARTNEY, Lecturer upon comparative Anatomy and Physiology at St. Bartholomew's Hospital, &c. &c. Octavo. 106 pages. DEBRETT, Piccadilly. 1801.

HAVING had occasion to notice the *original* of Dr. Murray's work in our last Number, we need only observe, that the present

present translation will prove a convenient vade-mecum to English anatomical students. The translator appears to have executed his task with sufficient accuracy for practical purposes, though not always in the most unexceptionable manner. Some parts of the original have been omitted or abridged; the names of many of the muscles have been altered, (instead of which, we think, it would have been better to have inserted the synonyms;) and *all* the Latin names of the arteries are retained.

ART. VII. *On the Origin of the vaccine Inoculation.* By EDWARD JENNER, M.D. F.R.S. &c. Quarto. 8 pages. London. 1801.

OF this unpublished pamphlet we can give no other account than that which the ingenious author himself has given. He was induced to write the following concise History of the Origin of vaccine Inoculation, from frequently observing, that those who only consider the subject cursorily, confound the casual cow-pox with the disease when excited by inoculation.

"My inquiry into the nature of the cow-pox," Dr. Jenner says, "commenced upwards of twenty-five years ago. My attention to this singular disease was first excited by observing, that among those whom in the country I was frequently called upon to inoculate, many resisted every effort to give them the small-pox. These patients I found had undergone a disease they called the cow-pox, contracted by milking cows affected with a peculiar eruption on their teats. On inquiry, it appeared that it had been known among the dairies time immemorial, and that a vague opinion prevailed that it was a preventive of the small-pox. This opinion I found was, comparatively, new among them; for all the old farmers declared they had no such idea in their early days—a circumstance that seemed easily to be accounted for, from my knowing that the common people were very rarely inoculated for the small-pox, till that practice was rendered general by the improved method introduced by the Suttons: so that the working people in the dairies were seldom put to the test of the preventive powers of the cow-pox.

"In the course of the investigation of this subject, which, like all others of a complex and intricate nature, presented many difficulties, I found that some of those who seemed to

have undergone the cow-pox, nevertheless, on inoculation with the small-pox, felt its influence just the same as if no disease had been communicated to them by the cow. This occurrence led me to inquire among the medical practitioners in the country around me, who all agreed in this sentiment, that the cow-pox was not to be relied upon as a certain preventive of the small-pox. This for a while damped, but did not extinguish, my ardour; for as I proceeded, I had the satisfaction to learn that the cow was subject to some varieties of spontaneous eruptions upon her teats; that they were all capable of communicating sores to the hands of the milkers; and that whatever sore was derived from the animal, was called in the dairy the cow-pox. Thus I surmounted a great obstacle, and, in consequence, was led to form a distinction between these diseases, one of which only I have denominated the true, the others the spurious, cow-pox, as they possess no specific power over the constitution. This impediment to my progress was not long removed, before another, of far greater magnitude in its appearances, started up. There were not wanting instances to prove, that when the true cow-pox broke out among the cattle at a dairy, a person who had milked an infected animal, and had thereby apparently gone through the disease in common with others, was liable to receive the small-pox afterwards. This, like the former obstacle, gave a painful check to my fond and aspiring hopes: but reflecting that the operations of Nature are generally uniform, and that it was not probable the human constitution (having undergone the cow-pox) should in some instances be perfectly shielded from the small-pox, and in many others remain unprotected, I resumed my labours with redoubled ardour. The result was fortunate; for I now discovered that the virus of cow-pox was liable to undergo progressive changes, from the same causes precisely as that of small-pox; and that when it was applied to the human skin in its degenerated state, it would produce the ulcerative effects in as great a degree as when it was not decomposed, and sometimes far greater; but having lost its specific properties, it was incapable of producing that change upon the human frame which is requisite to render it unsusceptible of the variolous contagion: so that it became evident a person might milk a cow one day, and having caught the disease, be for ever secure; while another person, milking the same cow the next day, might feel the influence of the virus in such a way, as to produce a sore or sores, and in consequence of this might experience an indisposition to a considerable

siderable extent; yet, as has been observed, the specific quality being lost, the constitution would receive no peculiar impression.

"Here the close analogy between the virus of small-pox and of cow-pox becomes remarkably conspicuous; since the former, when taken from a recent pustule, and immediately used, gives the perfect small-pox to the person on whom it is inoculated; but when taken in a far advanced stage of the disease, or when, (although taken early,) previously to its insertion, it be exposed to such agents as, according to the established laws of Nature, cause its decomposition, it can no longer be relied on as effectual. This observation will fully explain the source of those errors which have been committed by many inoculators of the cow-pox. Conceiving the whole process to be so extremely simple as not to admit of a mistake, they have been heedless about the state of the vaccine virus; and finding it limpid, as part of it will be, even in an advanced stage of the pustule, when the greater portion has been converted into a scab, they have felt an improper confidence, and sometimes mistaken a spurious pustule, which the vaccine fluid in this state is capable of exciting, for that which possesses the perfect character.

"During the investigation of the casual cow-pox, I was struck with the idea that it might be practicable to propagate the disease by inoculation, after the manner of the small-pox, first from the cow, and finally from one human being to another. I anxiously waited some time for an opportunity of putting this theory to the test. At length the period arrived. The first experiment was made upon a lad of the name of Phipps, in whose arm a little vaccine virus was inserted, taken from the hand of a young woman who had been accidentally infected by a cow. Notwithstanding the resemblance which this pustule, thus excited on the boy's arm, bore to variolous inoculation, yet as the indisposition attending it was barely perceptible, I could scarcely persuade myself the patient was secure from the small-pox. However, on his being inoculated some months afterwards, it proved that he was secure *. This case inspired me with confidence; and as soon as I could again furnish myself with virus from the cow, I made an arrangement for a series of inoculations. A number of chil-

* This boy was inoculated nearly at the expiration of five years afterwards with variolous matter, but no other effect was produced beyond a local inflammation around the punctured part upon the arm.

dren were inoculated in succession, one from the other; and after several months had elapsed they were exposed to the infection of the small-pox, some by inoculation, others by variolous effluvia, and some in both ways; but they all resisted it. The result of these trials gradually led me into a wider field of experiment, which I went over not only with great attention, but with painful solicitude. This became universally known through a Treatise published in June 1798. The result of my further experience was also brought forward in subsequent publications in the two succeeding years, 1799 and 1800. The distrust and scepticism which naturally arose in the minds of medical men, on my first announcing so unexpected a discovery, has now nearly disappeared. Many hundreds of them, from actual experience, have given their attestations that the inoculated cow-pox proves a perfect security against the small-pox; and I shall probably be within compass if I say, thousands are ready to follow their example; for the scope that this inoculation has now taken is immense. An hundred thousand persons, upon the smallest computation, have been inoculated in these realms. The numbers who have partaken of its benefits throughout Europe and other parts of the globe are incalculable: and now it becomes too manifest to admit of controversy, that the annihilation of the small-pox, the most dreadful scourge of the human species, must be the final result of this practice."

MEDICAL CORRESPONDENCE.

Art. 8. *A Proposal to terminate the Controversy respecting the Use of Acids in Lues Venerea.* By WILLIAM BLAIR, A.M. F.M.S. Member of the Royal College of Surgeons in London, Surgeon of the Lock Hospital and Asylum, and of the Finsbury Dispensary, &c.

To the Editors of the London Medical Review and Magazine.

GENTLEMEN,

IT appears from the declarations of some British medical writers who have published very lately, that the dispute concerning the power of acids in venereal affections is not yet completely decided: and although the bulk of practitioners have, for some time past, inclined to the opinion of their in-

sufficiency in genuine cases of syphilis, there still remains so large a number of persons who maintain an opposite notion, that it will probably be deemed not unreasonable to urge the execution of Dr. Beddoes's plan for terminating this controversy *.

You will immediately perceive I am alluding to a printed letter of that physician, which "is to be understood as addressed to the members of the surgical profession in general." He openly "challenges" them to "select a certain number of patients, labouring for the first time under the symptoms of secondary lues, and such as have taken no mercury, or none lately;" and to "let two or three surgeons attest the cases." He further challenges them "to select a number of other patients who have relapsed, after one or more apparently proper courses of mercury." Peculiarly strict attention is required to be paid to the choice and management of these patients, who are to pass through an unexceptionable course of treatment with the acids, under the immediate inspection of proper medical attendants. The result of these experiments, it is presumed, must be finally decisive, and may be altogether relied on by the public.

Above seven months have elapsed since this proposal was made by Dr. Beddoes. I am not acquainted with any attempts now making to satisfy his wishes: but as the trial here recommended is neither tedious nor difficult to be executed, I should be happy to assist in bringing the acid remedies to such a test; and beg leave, through the medium of your monthly

* In several parts of America and the European continent this subject is no longer a matter of debate. The following extract will shew how little credit is now given to the medical reports of Dr. Beddoes and some other English practitioners:

"*Pouvons nous croire sans réserve ce que les Anglais affirment?*

"Les médecins de cette nation sont, à juste titre, estimés dans tous les pays; mais cet ordre respectable renferme quelques novateurs qu'on suspecte, et dont on se défie avec raison. Ce sont ces derniers qui ont fait dire aux Allemands, que les Anglais sont empiriques, et au Français, qu'ils annoncent souvent des fait qui n'ont aucune réalité: on pourrait citer entr'autres les cures nombreuses attribuées aux acides nitrique, muriatique, &c. que l'experience a démenties à Paris; où l'on employa ces nouveaux remèdes contre le venin syphilitique, pendant long-tems, avec la plus scrupuleuse exactitude, et toujours sans succès, ou du moins, sans que ces médicamens détruisissent les effets du virus syphilitique, aussi complétement, et d'une manière aussi sure, qu'on l'avait annoncé. On pourrait rappeler encore les merveilles de la médecine pneumato-chimique, si vantée par BEDDOES, et rejectée à cette heure, par l'auteur même qui l'avait prônée."

Rapport sur le Cowpox, par A. AUBERT, *D.M.—Discours Préliminaire, p. vii.*

review,

review, to express my readiness to act in conjunction with any respectable body of practitioners in London who may choose to concur in so laudable an undertaking.

I remain, &c.

Great Russel Street, WILLIAM BLAIR.
Bloomsbury, May 19, 1801.

Art. 9. *On the Introduction of the Cow-pox in the East and West Indies, in Sicily, and Russia.* By Mr. RING.

To the Editors of the London Medical Review and Magazine.

GENTLEMEN,

IT will afford many of your readers no small degree of satisfaction to hear, that vaccine inoculation is established in the East and West Indies, in Sicily, and in Russia.

By an overland dispatch lately arrived, we are informed it is practised at Bombay; probably by means of the matter sent from Constantinople by Dr. Whyte. In a former communication I mentioned, that the practice had been introduced into Jamaica by Mr. Rooke.

In consequence of the frequent failure of infection, in his own hands and those of others, Mr. R. began to suspect, that people of colour were insusceptible of the disease. He is now well convinced that this suspicion was unfounded. Nevertheless, the insertion of the vaccine fluid in his own arm was singularly providential.

When the last advices were received from him, he had successfully inoculated all the people on the estate of Charles Rose Ellis, Esq. except those who laboured under the yaws; and many of them had been submitted, both by effluvia and inoculation, to the infection of the small-pox, which they resisted.

By these incontestable proofs of its efficacy, the most incredulous were convinced; and the practice was making a rapid progress throughout the island. The small-pox had been fatal to many estates: in one, where it was making the most dreadful ravages, it was soon checked by the introduction of the cow-pox.

By a letter from Dr. Marshall, dated Palermo, March 27, 1801, I am informed, that he arrived in Sicily on the 12th of that month; and had commenced the vaccine inoculation with success. The King of Naples has appointed an hospital, where his

his first physician and first surgeon are to inoculate, under the direction of Dr. Marshall and Dr. Walker; and to instruct the other physicians and surgeons of the country, that the practice may be easily propagated and permanently established in that kingdom.

At St. Petersburg, Dr. Halliday has inoculated several persons in the hospital, and with the same happy success that has attended the practice in every other country.

I am, with great respect, Gentlemen,
Yours, &c.

New Street, Hanover Square, JOHN RING.
May 20, 1801.

Art. 10. *An improved Mode of applying Caustic to Strictures in the Urethra.* By RICHARD CARTWRIGHT, Member of the Royal College of Surgeons in London, and Surgeon to the Naval Asylum.

MUCH has been said on the subject of strictures in the urethra, and great difference of opinion has prevailed with regard to the best mode of removing them; but professional men have not differed so much on the nature of the remedy, as on the practicability of limiting its application. Few, I believe, would object to the use of caustic, provided it could be conveyed to the diseased part without affecting the sound part of the canal.

How far that can be accomplished by the following mode of applying it, the reader himself will be enabled to judge. I have only to remark, that I have been in the habit of employing it in pretty extensive private practice for several years, without the misfortune of experiencing one single instance of its failure, although many of the cases had been previously, but unsuccessfully, treated in the manner recommended by Mr. Home; and that I have never witnessed a single occurrence of any of the very alarming symptoms, which have occasionally followed the application of caustic by the armed bougie.

This event was naturally to be expected, if we consider the difference in the extent of surface affected by the caustic applied in the mode here recommended, and in that by Mr. Home. I need not describe Mr. Home's mode of applying the caustic by the armed bougie, which is now pretty generally known. The idea of a flexible canula will immediately suggest to every

one

one the mode I have adopted: the great difficulty has been to procure a canula made in such a way as fully to answer the purpose. The late Mr. Wyatt, so long as twenty years ago, had canulæ made with the same express view; but their sides were too thick, and the calibre so small, that he could not convey the caustic up the passage in the manner he intended.

The best canula consists of a web made of the finest silk or catgut, which is afterwards covered with the elastic gum, the inside of which has also a covering of the same gum. The sides of the canula ought to be as thin as possible, possessing sufficient elasticity to counteract the contraction of the urethra, and the end of it should have a few additional coverings of the gum to prevent its scraping in its passage along the canal. This, with a stilet fitted to it, (for which the common plaster bougie serves the best,) and another bougie of such a size as to pass freely through the canula, with a little lunar caustic in fine powder, form the whole of the apparatus. In order to avoid mistake, it will be advisable to have a white bougie for the stilet, and a black one for the purpose of carrying the caustic through the canula, upon which the quantity of caustic will be more readily discerned. The stilet should fill up exactly that end of the canula which is to be introduced, and this it can easily be made to do by moulding it a little with the fingers; the black bougie should be cut off at the broader end, that it may have the greatest flat surface, and on the other end a mark should be made to correspond with the length of the canula.

The manner of applying the caustic is then very simple. Pass the canula, fitted with its stilet, gently down to the stricture; withdraw the stilet, taking care to keep the canula steady in its place; then dip the flat end of the black bougie into the powdered caustic, so that the surface may be covered, and apply it with as much celerity as possible to the stricture; which application may be repeated two or three times, or more, as the operator may think proper. In cold weather the black bougie will require to be warmed a little, in order to make the caustic adhere to its surface for the first application*. The separation of the slough, depending on the action of the part to which the caustic has been applied, will take place at different times under different circumstances. It will, how-

* The canula, after being used, should be washed with cold water, wiped, and left to dry on a brass wire for a day or two, and should then be besmeared inside and outside with a little oil; and with these precautions one canula will serve for several hundred applications.

ever,

ever, seldom happen in less than two days; about which time I generally try to pass a bougie; and, should there be pus formed, I go on with the daily use of bougies alone, as long as the stricture dilates and the suppuration continues: but should the suppuration stop before the stricture is removed, it will then be necessary to have recourse again to the use of the caustic.

The advantages which this mode of applying caustic to strictures in the urethra has over that by the armed bougie are obvious: by means of the canula* the caustic may be conveyed with great facility to any part of the canal, and may be as confined in its application as the operator may wish, however great the irritability of the urethra may be; and as to the pain occasioned, the patient rarely feels more than is experienced in passing a common bougie, and frequently less.

The caustic may thus be applied of its full strength, undiluted by mucus, blood, or urine. The slough, from so partial and limited an application, is necessarily small, the inflammation very inconsiderable, and the hæmorrhage, if any, seldom exceeds a very few drops of blood. I have never met with a case of swelled testicle from the application of caustic through the canula.

In some few instances there has been a slight retention of urine, which has always soon subsided under the customary remedies. This has been the greatest inconvenience that ensued even in patients who indulged in every irregularity and excess of free living.

I am well convinced, from ample experience, that a patient labouring under stricture runs more risk in submitting to the treatment by bougies alone, than by caustic introduced through the canula. This may be accounted for from the inflammation attending the use of bougies extending further than that from the application of caustic, of which there can be little doubt in old obstinate strictures.

The public would long ago have been in possession of this mode of applying caustic, had not many difficulties interposed in bringing the canula to its present state of perfection.

It was my intention to have given a selection of the most interesting cases of stricture which have fallen under my care, with practical observations on some effects of strictures not hitherto noticed, as well as on the comparative utility of the common plaster bougie and that of the elastic gum, which is

* Elastic gum canulæ of all sizes may be had of Mr. Savigny.

now made of such a pliability as readily to accommodate itself to the curvature of the urethra, and of sufficient hardness to resist the action from stricture*. This I shall, however, reserve to form the subject of a separate publication at some future day.

Postscript.

Since writing the above, a publication by Mr. Whately has fallen into my hands, proposing an improvement of Mr. Home's plan of applying caustic. The following are his directions how to prepare the bougie for that purpose: "Touch an eighth, or from that to a quarter of an inch, of the end of a bougie of any size, with a small brush dipped in common glue, as used by mechanics; and let the coating of glue be as thin as possible. The glued end must be immediately applied to a given quantity of powdered lunar caustic, put upon a piece of writing-paper; this should be done by alternately putting its different sides to the caustic, until the whole of it adheres.

"The bougie in this state must be laid in some dry place to harden, which effect will take place in a few hours. When it is sufficiently hardened, the glued end must be gently rolled to and fro upon a table, with a bit of smooth wood about four inches square, till it is perfectly level and smooth. If the bougie be very hard, or the weather cold, this end must be previously warmed a little by the fire. The part thus covered with caustic should then be very lightly rubbed with a bit of bees-wax, with the intention of giving it a very thin coating of this substance. After this let it be kept for use in a glass vessel well closed."

Now, admitting even that the caustic could really be applied, of its full strength, in this way, there is one very obvious and insuperable objection to this plan, that is to say, the mischievous consequences which must necessarily arise on withdrawing the bougie, in the sound part of the urethra, when the caustic is set at liberty by the solution of the glue. But as none of these mischievous consequences are stated by Mr. Whately to have ensued, I suspect that he has deceived himself in supposing, that he has been applying the caustic in its full strength, which we know must certainly have been considerably weakened in its corrosive poperties by its admixture with the glue, and its exposure to the atmosphere.

* See Mr. Blair's paper on this subject, contained in the fourth volume of the London Medical Review and Magazine.

Art. 11. *Methods of counteracting the Mischief occasionally arising from the Interment of the Dead in Cities, by Barilla and Chalk.* Proposed by Dr. MITCHILL of New York, in the Medical Repository, Vol. IV. p. 94.

THE mischief resulting from the corruption of human bodies, buried in the central parts of populous towns, Dr. Mitchill says, may be prevented by surrounding the body with alkaline substances. Those which are entitled to a preference for the present purpose are barilla and chalk.

Barilla, or the soda of modern commerce, is the substance used anciently in Egypt to prepare human bodies for embalming. Herodotus, the Greek historian, has mentioned it as being employed for that purpose; and the elder Pliny has written of its power to preserve dead bodies. There can be no doubt, by a sound expositor of the fiftieth chapter of Genesis, that the bodies both of Jacob and his eminent son Joseph were kept sweet and harmless by the barilla, which, according to the rites of the Egyptians, the physicians or embalmers applied plentifully to every part. Thus the corpse of the aged patriarch was rendered capable of being transported to the cave of Machpelah. The ruler of Egypt, under Pharaoh, being about to die, took an oath of the by-standers, his countrymen, that they should carry up his bones from thence. His death happened in the year 1635 before the Christian era, and he was not, at that time, carried into the land of Canaan, to be deposited with his father; but, one hundred and forty-four years after, Moses, on departing with the Israelites, took the bones of Joseph with him. And this affords a tolerable proof of the antiseptic power of the barilla; for, without such a preservative, they would, probably, in a much shorter time, have crumbled to dust. It is well worth the while to examine the learned and instructive commentary of Calmet * on these subjects.

This

* On le met (le corps) dans le sel (le nitre des anciens ou la soude) pendant environ quarante jours, &c.—*they put the body in natron, or soda, for about forty days, after which they wrap it in bandages with myrrh, gum, &c.*—Ceux qui n'ont pas le moyen de faire cette dépense se contentent de seringuer dans les intestins du mort, par le fondement, une liqueur tirée du cedre; et l'y laissant, enferment les corps dans le sel du nitre. Ce sel a la vertu de desseicher les chairs solides, et de les exempter de la pourriture, &c.—If the persons are too poor to go to any considerable expense, the embalmers cleanse the intestines by syringing, and put the body afterwards in soda, for seventy days, to dry it; and this is the

This salt is produced naturally in Egypt, and dug out of the earth. But it is produced artificially in Sicily and Spain from the ashes of certain plants. There is great consumption of it in the manufactories of soap and glass, for which purposes it is preferable to potash. Barilla, or soda, is better than potash to preserve bodies from decay, and, at the same time, to render them innoxious. Potash attracts moisture from the air, and runs to a liquid; soda parts with its water very readily, and turns to a powder. The former is highly corrosive; the latter very feebly caustic. Hence the superior excellence of soda; for while it resists the humidity of the atmosphere, it attracts the acid of putrefaction, and thus guards the body from speedy decay, while it keeps it from degenerating to stench and poison; at the same time it discharges its carbonic acid or fixed air.

On account of the plenty of potash and pearl-ash in the American market, barilla is rarely brought to New York; it, at present, has no place in the price current. In London, barilla from Carthagena sells for about one fifth less than pearl-ash from America; and that from Sicily for about one third less. There would be no difficulty in procuring it if wanted; it might be imported as ballast, or even manufactured at home. The method of using it would simply be to surround the dead body with this neat and white salt, by filling up the coffin with it.

Or, if soda could not be procured, or if prejudices were entertained against it, powdered chalk would fully answer the purpose. Chalk is a sort of limestone; for, in many places where it naturally abounds, it is burned to a calx, and used for mortar. A notion has prevailed, that quick-lime is necessary to overcome the dangerous effluvia of bodies: this is not the fact. Quick-lime, indeed, by its corroding quality, will disorganize, to a certain extent, the body to which it is applied: for this reason, I suppose, it is, that it has not been more generally used; as most persons have felt a degree of reluctance to subject the bodies of their lately deceased friends and relatives immediately to the action of that fierce and vio-

substitute for the more costly mode of embalming. *Calmet, Commentaire Litteral sur la Genèse*, ch. 1. p. 839.—Why have not physicians and philosophers discerned that soda, which is so wonderfully preventive of putrefaction and its consequences in the cases related, could answer just as good a purpose in preventing the bad effects of corrupted beef, mutton, pork, and fish, in barrels, in the holds of ships, and in the stomach and intestines of men?

lent destroyer. There is no need of applying lime in its quick or caustic state; mild powdered limestone will do just as well. Pulverized chalk is powdered limestone, and in a condition exactly fit for the purpose; and if it is wanted in a still nicer form, whiting, well dried in an oven, will be found to possess the requisite antipestilential qualities. To surround a dead body, then, with powdered chalk or whiting, is a safe, economical, and, as far as I can judge, an unexceptionable practice. And if there is any thing consoling in the reflection, the survivors may be assured that chalk, as well as soda, while it provides against their noxious effects, will operate in preserving the mortal remains of their friends the longer from complete disorganization. And I refer those who desire proofs of this, to the innumerable relics of animals, in beds of chalk and other forms of calcareous earth, all over the world.

Art. 12. *'Excellence of calcareous Materials for building and paving Cities, particularly as respects their Power to overcome the exciting Cause of Fevers.* In a Letter from Dr. MITCHILL to the Hon. RICHARD VARICK, Esq. Mayor of the City of New York.

SIR, *East Rutger's Street, June* 18, 1800.

I CRAVE the indulgence of the chief magistrate of the city in which I reside, while, in a few sentences, I state some facts which seem to me capable of conducing to the good of the community. They refer to the quality of the materials which ought to be selected for the construction of houses, and for pavements of streets, in cities. It will, I doubt not, become evident to you, that of all the incombustible substances of which houses and pavements have been formed, calcareous earth, in the forms of limestone and marble, is the best.

The wholeseme operation of lime is so well established, that nobody pretends to doubt it: in buildings it answers two purposes; the first as a cement, enabling the architect to make his pieces of solid materials stick together; and the second as a neutralizer of the noxious fluids commonly produced where human beings dwell thick together. For the former of these purposes it is necessary that crude limestone should be calcined; for, by that operation, its carbonic acid is driven off, and the remaining earth rendered fit to be slacked, and turned to plaster and mortar: but for the latter intention, this exposure

posure to fire in a kiln is not necessary, since the acid of pestilence, by virtue of its strong and corrosive qualities, is attracted by the earthy basis, and overcome by it completely, without that process.

A marble differs from a limestone not in its internal characters, but only in its external qualities, particularly as they affect the sight. Strictly speaking, all marbles are limestones, and so indeed are chalks; and limestones are dignified with the appellation of marbles when they receive a high polish, and possess a lustre and colours agreeable to the eye. In all their forms, limestones and marbles consist chiefly of lime united to "carbonic acid," called also "fixed air." And these two substances commonly form rocks and stones of great compactness and durability. Limestone, then, though it will not answer the purposes of beauty so well as marble, is quite as good for the uses of architecture and of health. When intended to constitute the chief and solid material of a building, it must be used in its crude state; when wanted as a cement, it must be burned.

Crude limestone and marble being thus capable of attracting and destroying infectious fluids, it became a serious matter of inquiry with me, more than a twelvemonth ago, whether large tracks of country, underlaid by strata of these substances, were in any degree exempted from febrile distempers? The immunity of such regions from intermittents, remittents, dysenteries, and the more malignant forms of fever, is most remarkable in many parts of the earth.

Struck with the comfortable result of this part of the inquiry, it immediately occurred to me, that if a city was built of these materials, it ought to be very healthful, as respected the causes and existence of fevers at least. I had not ruminated on the subject long before Mr. Da Costa, an intelligent Portuguese gentleman, gave me a description, in writing, of the city of Lisbon, built of these very materials, and at once one of the most nasty and most healthy places in Europe.

Finding thus a great city ready built to our hands, my speculations no more appeared in the light of a project. The experiments had long been made, and their truth was manifest. I then recollected to have admired very much the chalky soil of Oxfordshire, in England, when I was there, surrounding, to a great extent, the city and university of Oxford. Chalk is but a softer kind of limestone, and this celebrated seat of learning is remarkably healthful.

Immediately it came to my remembrance, that the handsome

some structures with which I had been pleased so much at Bath, upon the Avon, were composed of limestone too. Here was another coincidence between great healthfulness and calcareous materials for buildings.

In the collection of mineralogy I had made for Columbia College, I knew there was a piece of the rock which constitutes the Somers islands, and of which the houses at St. George's, in Bermudas, are composed. By experiments made on this specimen I became convinced of its calcareous nature; and this place is proverbial for its salubrity.

Soon afterwards Major Imrie's description of the mountain of Gibraltar fell into my hands; that discerning officer calls this famous promontory "a mountain of marble." I procured a piece of this rock, and am satisfied, by experiment, of its calcareous composition. Gibraltar also is famed for its friendship to the health of man.

In short, having been lately on a journey to Pennsylvania, I observed that Easton, Nazareth, and Bethlehem, in the county of Northampton, were built of limestone. These, and particularly the latter of these villages, after more than fifty years experience of the Moravian brethren, has a remarkable correspondence with the places already mentioned in point of health. Febrile distempers are very rare.

It now appears to me, the efficacy of limestone, marble, and chalk, in their ordinary, natural, or crude forms, to prevent febrile diseases by absorbing and destroying their exciting causes, is thus most amply verified. What have the citizens of such places as New York and Philadelphia to do, but to introduce it into use? Fortunately for our city, the Hudson runs through a limestone country for miles between Poughkeepsie and Newburgh; and, even on this side of the Highlands, it is found at the base of the Donderberg, and is plentiful at Verplanck's Point. It is submitted to your consideration, whether, as it may be so easily procured by water-carriage, it would not be wisest and best to require the inhabitants, by public authority, to have their buildings made of it? and whether it would not be worth the while to introduce it, as soon as possible, for paving side-walks and streets, as well as for flagging cellars, alleys, and yards?

Providence has furnished calcareous earth with a liberality equal to its extensive utility; and, under the conviction of the great benefits to be derived to society from a plentiful and proper use of it, I have ventured to suggest these few considerations to you, with the hope, that if they should seem to you worthy

worthy of that honour, they may be laid before the common council of the city as matter for reflection.

With sentiments of high respect,
I remain sincerely yours,
SAMUEL L. MITCHILL.

Art. 13. *Extract from an Account of the proposed Institution to prevent the Progress of the contagious Fever in the Metropolis.* By THOMAS BERNARD, Esq. May 8, 1801. Published by Order of the Society for bettering the Condition of the Poor.

THAT the poor of every populous town are peculiarly liable to the attacks of contagious distempers, is a fact which has been stated by Dr. Murray in his late publication, and of which a variety of melancholy evidence may be adduced. To those only who have been led to explore the recesses of poverty and disease in the metropolis, can it be known how many circumstances there are, both within and without the dwellings of the poor, contributing to the generating and spreading of infection; fatal and ruinous in their effects, though easily corrigible by the attention of the other classes of society.

By physicians of the dispensaries it had long been lamented that, among the close and unhealthy courts and alleys of the metropolis, the power of medicine was inadequate to check the progress of infectious fever, while parents and their children were, in all cases, to remain within their own infected walls. Even if health were restored by medical skill and attention, still the habitation remained subject to the acquired contagion, for want of that purification, the expense and trouble of which, though inconsiderable in themselves, were beyond the scope and extent of the funds of institutions often pressed upon by a number of claimants exceeding their means of relief.

It had, therefore, been the anxious wish of some of the directors of those charities, that an adequate remedy might be adopted for this evil. In the mean time, in May 1796, there had been formed at Manchester * the dignified and exemplary establishment of Houses of Recovery, to check the progress of the contagious fever among the poor. The members of the

* It should be noticed, that fever-wards for preventing the spreading of infectious fevers had been proposed by Dr. Haygarth in 1775, and had been established by him in Chester as early as 1783.

Society

Society for bettering the Condition of the Poor have contributed to make known the regulations of this charity, and its extraordinary and beneficial effects, in alleviating one of the greatest calamities to which our necessitous brethren are subject. For detailed information, the reader is referred to a recent Letter of Dr. Haygarth's on the Prevention of infectious Fevers *, to the three volumes of Dr. Ferriar's Medical Histories and Reflections, to Dr. Willan's Reports on the Diseases in London, and to a pamphlet of Dr. Murray's which has been lately published by the desire and at the expense of the Society. In the Society's Reports † there will be found some account of the Institution at Manchester, from whence I have selected the following circumstances:

1st. As to the comparative average of contagious fevers in Manchester, for three years previous to the establishment of the House of Recovery in May 1796, and in one year succeeding its establishment, it appears to have been as follows:

From September 1793 to May 1796	—	1256
From May 1796 to May 1797	—	26

2d. With regard to its effect on general health, as ascertained by the number of fever cases admitted into the Manchester Infirmary, previously to and after the establishment of the House of Recovery, there were

Fever patients in January 1796	—	226
in January 1797	—	57

3dly. As to the total of patients in the Manchester Infirmary, though before the establishment of the House many cases were refused on account of the greater press and claim of fever patients, there were

From June 1795 to June 1796	—	2880
From June 1796 to June 1797	—	1759
From June 1797 to June 1798	—	1564

4th. In order to shew the comparative mortality in the

* The practical conclusions in Dr. Haygarth's Letter on the Prevention of infectious Fevers are so deserving of attention, that I insert them as a note. "1st. Medical, clerical, and other visitors of patients in infectious fevers, may fully perform their important duties with safety to themselves. 2d. In any house, with spacious apartments, the whole family, even the nurses of a patient ill of a typhous fever, may be preserved from infection. 3d. Schools may be preserved from febrile infection. 4th. In an hospital, infectious fevers ought never to be admitted into the same wards with patients ill of other diseases. 5th. When an infectious fever is in a small house, the family cannot be preserved from it, unless the patients are removed into a separate building.

† See the Society's Reports, vol. i. p. 98, and vol. ii. p. 224, and p. 95 of Appendix.

House of Recovery upon the fever cases admitted into it, I proceed to observe that, from 19th May 1796 to 1st January 1797, there were admitted 274; of these there died 21: admitted in 1797, 349; of these there died 27: admitted in 1798, 381; of these there died 21. The proportion of deaths in the Manchester House of Recovery, for these three years, will therefore appear to be as follows: in 1796, not quite 1 in 11: in 1797, about 1 in 13: and in 1798, less than 1 in 18. It is no small gratification to observe the progress of success in the Manchester House of Recovery, a success which may be imputed to two circumstances; 1st, that the poor do now apply more early and more willingly; and 2dly, that they apply with more hope and confidence of recovery.

5th. The limits of the Manchester House of Recovery were, at first, necessarily confined to a few streets in the vicinage; they are now extended, without distinction, not only to all Manchester, but also to all its neighbourhood for three miles round, as far as patients can conveniently be brought: and yet with all this enlarged scope of benevolence, and with the admission of every fever patient to be found in those extensive limits, the number of patients in the House of Recovery were, when I visited it in August 1798, 19; and when I visited it in October 1799, 11.

6th. To these facts, tending to explain the benefits of such an institution in checking the progress of infection, and in diminishing the general proportion and prevalence of disease and mortality to which our nature is subject, I will add a statement of the relative bearings of expense and effect; and observe, that the fever patients cured in the Manchester House of Recovery, in the year 1798, were 360; all of whom had their houses and property cleansed, and purified from contagion, and the progress of infection completely stopped. The expense of this boon to human nature amounted to seven hundred pounds.

Impressed by these circumstances, and by other corroborating facts, for the detail of which the reader may refer to the Reports and to Dr. Haygarth's and Dr. Ferriar's publications, the Society has directed its attention to the subject; and in the early part of the preceding winter, at the request of the Society, Dr. Murray, one of the physicians to the Public Dispensary in Carey Street, prepared and published his "Remarks* on the Situation of the Poor of the Metropolis, as

* Sold at Hatchard's Piccadilly. See an account of this work in the 25th Number of the *London Medical Review*.

contributing

contributing to the Progress of contagious Diseases; with a Plan for the Institution of Houses of Recovery, for Persons infected by Fever." The pressure of the existing scarcity had delayed for a few months the progress of any active measures on the subject; a meeting, however, was at length called, for the first day of May, to take measures for forming the institution in the metropolis.

The attendance at this meeting was such as from the nature of the subject might have been expected. The Duke of Somerset, the Earl of Pomfret, the Bishop of London, and the Bishop of Durham, (who, by desire of the meeting, took the chair,) together with several of the respectable inhabitants of the metropolis, after the certificate from several physicians of hospitals and dispensaries in London, as to the prevalence of infectious fever, had been read, adopted unanimously, upon the motion of Lord Sheffield, the following resolutions: "1st. That it appears to this meeting, by a certificate from the physicians of the hospitals and dispensaries in London, that the contagious malignant fever has been, for some time past, and now is, prevalent in the metropolis; and that it has been occasioned by individual infection, which, with proper care, might have been immediately checked; or has been produced, or renewed, by the dwellings of the poor not having been properly cleansed and purified from contagion after the fever has been prevalent in them: that it also appears, that this evil (the injury and danger of which extend to every part of the metropolis) might be prevented, by cleansing and purifying the clothes, furniture, and apartments, of persons attacked by this disease, and by removing them from situations where, if they remain, the infection of others is inevitable.

"2. That a subscription be immediately set on foot, for the purpose of forming an institution for checking the progress of the contagious malignant fever in the metropolis, and for removing the causes of infection from the dwellings of the poor, upon a plan similar to that which has been adopted with great success and effect at Manchester.

"3. That a committee of five persons be appointed to prepare a plan for the institution, and to call a meeting of the subscribers, in order to lay the same before them for their consideration.

"4. That the said committee do consist of the Bishop of Durham, Dr. Garthshore, Dr. Willan, Mr. Wm. Waddington, and Mr. Bernard.

"5. That the said committee be authorized to open ac-

counts at such bankers in the metropolis as they shall engage to receive subscriptions."

A book was immediately opened, and the sum of 596*l.* 3*s.* subscribed, as a commencement of the fund of the institution; and the meeting of the contributors to this charity was adjourned until the committee should be ready to lay before them, for their consideration, a plan for the institution. In the mean time the committee has, under the authority of the general meeting, engaged the following bankers to receive subscriptions:

Messrs. Forster and Co. Mansion House Street.
Messrs. Devaynes and Co. Pall Mall.
Messrs. Ransom and Co. Pall Mall.
Messrs. Hoares, Fleet Street.
Messrs. Herries and Co. St. James's Street.

Observations.

It is a curious and interesting fact, that the establishment of one solitary House of Recovery at Manchester, with an expense not exceeding 700*l.* a year, should have nearly put an end to the contagious fever in that place; a place where the cotton-mills and a variety of other circumstances, aided by extreme population, furnish so abundant a supply for the renewal of infection. That in one year the average of fever should be diminished from 471 to 26, the fever cases of the General Infirmary to one fourth, their other patients to nearly half, and the proportion of mortality under the fever from a ninth to an eighteenth, afford a pleasing example of what may be done by active and intelligent benevolence, labouring for the benefit of its fellow-creatures. This, however, has been attended with many other advantages, in the diminution of the general mortality of that place, and in the improvement of the domestic comfort and well-being of the poor.

In the common cases of infectious fevers, if we suppose that only one in eight dies (and the proportion is sometimes one in four,) yet we must take into the consideration, that of the other seven many are nearly ruined in health and circumstances, and hardly any have the infection entirely removed from their houses. Such is the condition of parts of the metropolis, from whence the infection of fever, though occasionally suspended by a frost, has not for years been effectually removed; and in which, when the sad tale of indigence and mendicity is unfolded, the infectious fever so frequently occurs as the original cause of their calamity.

Whatever

Whatever may have been the call for this charity in Manchester, the circumstances of London more imperiously demand it; and I shall not willingly believe, that the energy and liberality of the metropolis will not be adequate to the increased sphere of action. If we can commence our operations only in a limited district, we may hope, even in a few months, gradually to extend its sphere, as has been rapidly and effectually done at Manchester, and soon to embrace the whole metropolis. The position, the local situation being once obtained, and the advantages pursued, the whole operation may be easily effected.

It has been said, that all the relief that is wanted may be supplied by the existing medical hospitals.—The evil is not recent, nor unknown to the faculty; nor is the remedy a matter of theory or of speculation. Five years experience have been supplied by the well-directed philanthropy of the inhabitants of Manchester. Yet in all that time no movement has been made in the metropolis; nothing has been done: and indeed it should seem, that before any effectual remedy for contagious fevers can be applied by our medical hospitals, that regulation, which confines the time of admission to one day in a week, must be given up. Those patients who are the proper objects of such an institution must be sought for in their wretched habitations, and brought in at all times, not as a mere boon or personal favour, not upon the interest of a governor, but upon the principle of municipal policy and free benevolence; applying its operations, upon a general system, for the benefit of the whole of the metropolis; and extending those operations from the roof of the hospital into the dwelling of the patient, so as to remove the very vestiges of infection.

In one way, indeed, the medical hospitals may both assist and receive benefit from this institution, by appropriating to it some of their vacant wards, at a fair rent, and with a separate and distinct entrance; a measure that not only would increase their funds, and their means of being useful, but by the furtherance of this institution would, if we may judge from what has passed at Manchester, greatly relieve them by diminishing the number of patients.

Before I conclude, I should observe that, though the mild weather of the two preceding winters has at present augmented the contagious fever in the metropolis *, yet it has not been in a

* As Dr. Haygarth's rules may be of particular use at present in preventing the spreading of infection, I add a copy of them at the end of this paper.

state

state of increase for some years back. From the period when it raged under the name of the plague * in London, and spread general and resistless havoc, a gradual diminution (as appears by the bills of mortality) had taken place at the end of the 17th century. Between that and the year 1750 it had again considerably increased; and we then find, that the deaths by fever in that year amounted to four thousand three hundred and five, being almost a fifth of the whole mortality of London. The improvements in the edifices of the metropolis, and the attention to domestic and personal cleanliness which was then awakened, have since reduced the mortality by fevers, except at the present time, to less than half its average in the year 1750. Let us therefore not despair of the further effects of medical skill and active philanthropy in the metropolis, but proceed in the confidence that we shall soon check the progress of the contagious malignant fever in London, as effectually and beneficially as has been done at Manchester.

Dr. Haygarth's Rules to prevent infectious Fevers.

"1. As safety from danger entirely depends on cleanliness and fresh air, the chamber-door of a patient ill of an infectious fever, especially in the habitations of the poor, should never be shut; a window in it ought to be generally opened during the day, and frequently in the night. Such regulations would be highly useful, both to the patient and nurses; but are particularly important previous to the arrival of any visitor.

"2. The bed curtains should never be close drawn round the patient, but only on the side next the light, so as to shade the face.

"3. Dirty clothes, utensils, &c. should be frequently changed, immediately immersed in cold water, and washed clean when taken out of it.

"4. All discharges from the patient should be instantly

* The want of air and cleanliness appear to be the great causes, both of the plague and of the malignant fever. There seems to be a considerable degree of affinity between these two diseases. In a late publication on the increase and decrease of different diseases, and particularly of the plague, Dr. Heberden, jun. has given a very curious detail of information on the subject. Many circumstances, and among others that of the malignant fever preceding and following the plague, seem to prove that the plague is merely an aggravated malignant fever. Dr. Haygarth observes, that the plague is a species of fever, "and that it does not render the atmosphere infectious farther than a few feet from the patient or the poison." *Dr. Haygarth's Letter, p.* 157.

removed.

removed. The floor near the patient's bed should be rubbed clean every day with a wet mop, or cloth.

" 5. The air in a sick room has, at the same time, a more infectious quality in some parts of it than in others. Visitors and attendants should avoid the current of the patient's breath, —the air which ascends from his body, especially if the bed curtains be closed,—and the vapour arising from all evacuations. When medical or other duties require a visitor or nurse to be placed in these situations of danger, infection may be frequently prevented by a temporary suspension of respiration.

" 6. Visitors should not go into an infectious chamber with an empty stomach: and in doubtful circumstances, on coming out, they should blow from the nose, and spit from the mouth, all infectious poison which may have been drawn in by the breath, and may adhere to those passages."

Art. 14. *A third successful Case of the new Method of treating Tetanus Traumaticus.* By Dr. STUETZ, of Schwæbisch-Gmuend. (For an account of the two former Cases, see London Medical Review, vol. v. p. 397.)

A SOLDIER, aged 26, was wounded on the 3d December 1799, in the left shoulder, by a musket-ball. He was regularly treated till the 25th, when an abscess, which had been forming for two days on the middle of the shoulder-blade, was opened, with the view of extracting the ball which was supposed to lodge there; but only pus mixed with blood was discharged.

26th. The patient was somewhat affected with trismus and tension of the muscles of the neck. The pulse and mobility of the limbs were still natural. He got, in the course of the day, a scruple of tinct. anod. with almond emulsion, and slept some hours, without any increase of his symptoms.

27th. As the symptoms still continued, he was directed to take two scruples of vegetable alkali dissolved in six ounces of water, at six doses, and in the evening two grains of opium. A fomentation of emollient herbs was applied to the painful and swollen shoulder. The patient slept well; the pain in his shoulder diminished; the trismus abated much; but the muscles of the neck still continued tense, and the pulse was febrile.

28th. Alkaline solution, fomentation, and opium were repeated. Slept well; trismus almost gone; but the tension

of

of the muscles of the neck continues, and the patient complains of tension of the muscles of the loins and belly. Pulse febrile; thirst excessive; ordered to drink of equal parts of barley-water and wine.

29th. Symptoms the same; treatment continued; the patient began to sweat all over his body, but more profusely over the head, with a diminution of his febrile pulse, thirst, &c. Stools daily, natural, but scanty; occasionally quiet sleep for some hours; swelling of the shoulder somewhat diminished; wounds inflamed and painful, and discharge very little pus. This evening the patient was attacked several times with clonic spasms, drawing his body backwards, especially after he had sitten up some time in bed.

30th. Some bony splinters were extracted from the wound, which was dilated, and a seton passed through the openings, and an emollient cataplasm applied to the shoulder, which was still hard, swollen, and painful. Another scruple of alkali was added to the solution, and a warm bath, with an ounce of caustic alkali, was ordered. In the bath, the patient found himself uncommonly well, and, as he expressed it, a new man; and, immediately after, a warm sweat extended over his whole body. The trismus was now quite gone, the tension of the muscles of the neck much lessened, but that of the abdominal and lumbar muscles continued. The spasms were weaker, and less frequent. In the evening he got down two grains of opium, and slept quietly the whole night.

31st. With the general good state of the patient, there were occasionally conjoined, partly tonic and partly clonic spasms of the muscles of the legs, a symptom already observed to indicate recovery from tetanus. In order to promote the cure with greater activity, the solution was made with four scruples of alkali, and half an ounce more of caustic alkali added to the bath; and during the course of the day three powders, with two grains of opium each, were given. The patient continued better; the tension of the muscles in the neck was entirely gone, and in the abdomen and loins much diminished; he was free from every kind of spasms, was able to walk about his room, and, at his own request, got fuller diet. In the night, he slept some hours quietly, till he was awakened by a shot in the neighbourhood of the hospital, which terrified him. He was immediately seized with several spasms, which drew his body backwards; he remained sleepless, and covered with a clammy sweat during the night, with

a very great anxiety. After taking, however, two doses of the opium powders, he slept from time to time.

1st January 1800. The spasms diminished much in frequency and strength, and only recurred on his being startled. The solution, bath, and emollient application were repeated. From the bath he found himself particularly benefited. It brought on a moderate warm perspiration, attended by great relief, and the spasms abated much; every symptom indicated returning health.

2d. To remove the clonic spasms which yet remained, the alkali in solution was increased to five scruples, the bath prepared with two ounces of caustic alkali, the opium powders with three grains, and the full diet and wine continued. The wound, till now dry and painful, began to discharge freely, and some splinters of the spine of the shoulder-blade came away.

3d. Symptoms the same; remedies continued; as the patient had had no stool for two days, he got a warm saponaceous clyster, which caused a copious evacuation of hardened fæces, which relieved him considerably.

4th. Almost quite well, and complains only of weakness of the lower extremities. The wounds continue to look well; but a new abscess is forming below the shoulder-blade.

5th. As there are still transient clonic spasms of the lower extremities, and great weakness, the alkaline solution was increased to two drachms, and given alternately with three grain doses of opium. The bath was also repeated.

6th. Weakness being now his chief complaint, the bath and alkaline solution were discontinued, and he took a decoction of Peruvian bark with cinnamon water. The abscess continues to increase, and gives a sense of fluctuation. At the mention of opening it, he was so much terrified, that he passed a very restless night, awakening almost every hour with spasmodic succussions of the whole body.

7th. Slept quietly in the morning, and is free from spasms, though there is more tension of the abdominal muscles. The cinchona was intermitted, and a solution of four scruples of alkali given alternately with three doses of opium of three grains each. The warm alkaline semicupium was repeated.

8th. The abscess was opened, and discharged two ounces of good pus. He felt much relieved, had no return of spasms, and acquired the command of all his limbs. The alkaline solution was gradually diminished, as well as the opium, till both were entirely laid aside. He took the decoction of cinchona

one day, but was so very averse to it, that a suitable diet of animal food was substituted for it. For some days after the 9th of January, he was allowed a pound of punch, and is now, in the beginning of February, when this report was written, perfectly well, walks stoutly, and the wounds are nearly closed.

To this somewhat prolix case, Dr. Stuetz subjoins some more concise observations:

1. Account of a partial clonic tetanus of the leg, successfully treated.—V. S. aged 21, was wounded on the lower and anterior part of the leg by a musket-ball. During the examination, the patient complained of tension and contraction along the whole of the leg, down to the toes; and soon after, spasms of the leg and foot came on. The wounded foot was immediately immersed in a warm bath with caustic alkali; the spasms abated. After some time, however, they returned; but on bathing the leg several times in the alkaline bath, they ceased, and did not return. During this treatment the patient took no internal medicine whatever.

2. Account of a fatal case of tetanus traumaticus.—In this case, before any remedies were tried, the patient was almost in the agonies of death, and therefore Dr. Stuetz thinks that his want of success does not in the least militate against his method.

3. Account of the further good effects of the alkaline bath in other external diseases.—It cured a caries of the foot of some weeks standing, in the space of fourteen days.

4. On a new method of administering remedies.—This consists in the alternate use of two medicines at the same time, and is founded on the experiments of Humboldt, the observations of our author, and the facility with which the system becomes habituated, and at last insensible, to the action of the most powerful remedies.

Art. 15. *Prize Question of the Philadelphia Medical Society.*

THE Philadelphia Medical Society, desirous of increasing the stock of useful medical knowledge, have determined to offer a medal, of the value of sixty dollars, for the best dissertation in answer to this question:—"What are the effects of the following medicines upon the human body, especially upon the pulse; viz. hyoscyamus niger (black henbane,) datura stramonium (thorn apple,) conium maculatum (hemlock,)

(hemlock,) camphor, amber, musk, digitalis purpuera (foxglove,) scilla maritima (sea-squill,) rhododendron maximum (an indigenous American plant called mountain laurel,) and the principal preparations of lead?"

Dissertations on this subject, competing for the prize, and written either in the English, French, or Latin languages, must be forwarded (post paid) to the secretary of the Philadelphia Medical Society, on or before the first Saturday in February 1802. To each of the dissertations a motto must be prefixed, and the same motto must be put upon the back of a sealed letter containing the name of the author. All the dissertations, excepting that to which the prize shall be adjudged, will be returned to any place that may be directed, with the letters which accompanied them unopened. Thus the names of unsuccessful candidates will be known only to those to whom they may themselves communicate them.

Art. 16. *An Account of Mr. Mann's Invention to supply the Loss of amputated Limbs.* Communicated to Mr. Blair, and by him to the Editors.

THE following private letter to Mr. Blair, from a friend who wishes his name not to appear in print, is deemed of sufficient importance to merit a place in our Review. We are assured by Mr. Blair, that he has the fullest reliance upon the honour and veracity of the writer, as well as on the correctness of his information.

Dear Sir,

IN compliance with your request, I offer to you as correct an account as I am able to give, of the machine invented by Mr. Mann, of Bradford in Yorkshire, for supplying the loss of amputated legs, and the advantages which it possesses over every other instrument of the kind hitherto presented to the public.

The chief objects to be proposed in an invention of this nature are, ease, convenience, symmetry, and action, such as may convey the appearance of life.

In order to the first, it is requisite that the machine be fitted with great accuracy to that part of the body with which it is to come in contact, and that the materials be altogether as light as possible. Without the former, the best constructed instrument, in other respects, will be useless, and witho

the latter, burdensome and fatiguing. How far Mr. Mann has succeeded in the one respect, will most strikingly appear from the instance of a Mr. Selby, of Bingley in Yorkshire, who, after having made trial of four different artificial legs, made by different artists, to no purpose, owing to the extreme tenderness of his amputated limb, applied to Mr. Mann, and was immediately enabled to walk with comfort *. In cases of below-knee amputation, Mr. Mann's method of fitting is peculiarly happy. The common peg leg alone excepted, his machine is also by far the lightest that I have been able to meet with †.

The next thing to be studied is convenience; in order to which it is requisite that the machine be capable of accommodating itself to every circumstance and situation in which the wearer is liable to be placed. It is necessary, for instance, that a person be able to sit comfortably, as well as to stand, and to ride on horseback, or in a carriage, as well as to walk. In many of these respects, the peg leg loses far more in convenience than it gains by its lightness. There is a perpetual danger, from the narrowness of its extremity, of its getting into those crevices with which the pavement abounds, and of its sinking too deep in the mud when walking on soft ground; not to mention that extreme defect in point of appearance, which is so offensive to the eye, and shocking to the feelings both of the wearer and the spectator.

In order to obviate the last-mentioned defect, artificial legs have long been constructed with a view to the preservation of symmetry and proportion; but, till Mr. Mann's invention was known, they were generally complained of as heavy and unmanageable. From the circumstance of the knee being quite stiff when walking, it was necessary to move them in a semicircular direction, to avoid tripping against the stones, &c.; and the wearer could not bend the knee to sit down, without first unloosing a pin or bolt with his hand.

I shall now introduce the account which Mr. Mann gives of his invention, for the truth of which I myself (and upwards of an hundred other persons) can vouch, from per-

* See the letter from him in Mr. Mann's account of his invention. I believe this gentleman had been obliged to make use of crutches for twenty years, and had given up every hope of ever being able to walk, till he became acquainted with Mr. Mann.

† His leg, for a below-knee amputation, does not weigh more than from two pounds to two and a half; whereas those which are composed of copper, tin, &c. are found to weigh more than twice that amount.

sonal

sonal and happy experience * : " First, The external appearance of the artificial leg, to be supplied under the sanction of this patent, cannot be discriminated from the natural, and the materials are at once light and durable. Secondly, It may be applied, or taken off, in a few moments, without the least pain or trouble to the wearer. Thirdly, The various circumstances of ungracefulness, rigidity, and inconvenience, so visible in other adscititious members, are in this obviated and remedied. Finally, As it contains an anatomical and mechanical analogy to the several articulations of the knee, ankle, toes, and foot, and exercises all their functions, *per se*, merely by being walked on; so in sitting, riding, or standing, it instantaneously accommodates itself to every flexure, extension, elevation, and attitude of the natural leg and foot, without any aid from the hand of the wearer, or other extrinsic application."

The basis of this invention was a contrivance for rendering the knee stiff when the pressure of the body is upon the leg, and flexible as soon as the pressure is removed. Hence, the moment the foot is taken from the ground, the lower part of the leg flies backward by the exertion of the knee forward, and again recovers itself by the time that it is necessary to take the second step, being assisted by springs introduced for that purpose. Thus, with perfect safety, there is every appearance of live motion; the necessity of semicircular movement is obviated, and it is difficult to discover the least appearance of any thing artificial. The motion of the ankle and toes is equally natural and convenient: instead of falling down when taken from the ground, the foot is kept up by springs till the pressure come upon the heel; by which means the danger of tripping is wholly avoided. It is a peculiar excellence of these springs, that they are of a kind which may be purchased at the low rate of sixpence apiece, and in case of any one failing, may be replaced by the wearer in the space of a few minutes.

Without expressing my surprise at an advertisement in the Medical and Physical Journal of March last, or declaiming against the arrogance and presumption of the advertiser, I shall briefly point out the defects of the instrument there referred to, and my reasons for giving the preference to that which I have above described. In the first place, the materials are bad: for, leather sockets, lined and stuffed in the manner he

* My own limb was amputated very high above the knee.

describes *, will not answer the purpose. I have tried them, and found them exceedingly uncomfortable. In the second place, he says that there are no springs in the leg, except a few in the ankle; and I am persuaded that, without springs to assist the motion of the knee-joint, the leg will swing like a pendulum rather than move like a natural leg; and that in quick walking it will not recover itself in time for the wearer to set it down with the foot fairly under him. Again, he proposes to shape the leg with stuffing. This I have also tried, and found that it was perpetually losing its form. Cork is equally light, and will always retain its shape. There is another defect as disagreeable as any of the preceding; its joints, both at the knee and ankle, are constructed in such a manner, that, after a few months use, they will become so loose as to shake, and make the most offensive noises. This indeed, he says, is to be prevented by stuffing; but it is well known, that whatever stuffing may do while it is new, it will soon lose its elasticity, and then its power of silencing noises, &c. is at an end. In short, except the lock, which is evidently borrowed from Mr. Mann's invention, though introduced in a different form, there is nothing in the construction of that machine which is entitled to the least merit; nothing which has not been repeatedly tried without effect; nor will any thing but that long experience and attentive observation which Mr. Mann has bestowed on the subject, ever bring any other similar invention to even a tolerable state of perfection.

It is to be recollected, that before and since the patent was obtained, Mr. Mann's invention has been the subject of his special study for the space of nearly twelve years; during all which time it has been in a state of progressive improvement. The variety of cases which have come under his notice, and the vast experience which has been connected with his long and abundant practice, must necessarily give a person of his mechanical ingenuity the advantage of every novice on the subject.

I have only to conclude with expressing my sincere wish, that the faculty in general were better acquainted with Mr. Mann's invention; that, when reduced to the necessity of performing so painful and humiliating an operation as that of amputating a leg, they might know where to recommend their patient for the best substitute. The inventor's brother, the

* My information is taken from his specification at the Patent Office.

Rev.

Rev. J. Mann, N° 41, Allsop's Buildings, Mary-le-Bone, will be able to confirm to you all that I have stated.

Believe me to be, with much respect,

May 22, 1801, *London.* Yours, &c. &c.

Art. 17. *Report of the Diseases prevailing in London from the 20th of April to the 20th of May.* Communicated to the Editors by Dr. MURRAY, Physician to the Public Dispensary.

FEBRES intermittentes		3	Cholera	—	2
Febres continuæ		34	Diarrhœa	—	9
Hectica	—	1	Diabetes	—	1
Ophthalmia	—	3	Hysteria	—	3
Cynanche tonsillaris		2	Tabes	—	2
Pneumonia	—	4	Hydrops universalis		2
Rheumatismus acutus		3	Ascites	—	2
——————— chronicus		8	Anasarca	—	6
Lumbago	—	6	Scrofula	—	1
Erysipelas	—	1	Icterus	—	1
Rubeola	—	2	Gonorrhœa pura		2
Scarlatina anginosa		2	Ischuria cystoplegica, Sauv.		1
Hæmoptysis	—	2	Dysuria	—	2
Phthisis	—	14	Amenorrhœa	—	7
Hæmorrhois	—	1	Dysmenorrhœa		2
Menorrhagia	—	3	Psora	—	7
Abortus	—	2	Morbi cutis chronici		6
Leucorrhœa	—	8	Asthenia	—	6
Catarrhus	—	25	Cephalalgia	—	4
Dysenteria	—	2	Pleurodyne	—	3
Paralysis	—	2	Lithiasis	—	3
Dyspepsia	—	16	Dentitio	—	1
Palpitatio	—	1	Verminatio	—	2
Dyspnœa	—	4			
Pertussis	—	1	Total number of cases		228
Colica	—	1			
Colica pictonum		2			

In consequence of an error in printing the report of last month, the statement on the subject of continued fevers was confused and unintelligible. The third and fourth sentences of that report should stand thus: "Formidable, however, as these symptoms are, the disease has not terminated fatally

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in any of the cases here adverted to, except where its violence was aggravated by the unfavourable circumstances which subsist among the lowest orders of the people. In the less miserable habitations of the poor, and in the comfortable and well-ventilated houses of the superior classes, it has generally declined;" &c.

In the present month, the frequency of continued fevers has been precisely as before; their symptoms have been similar to those mentioned in the last report; but unfortunately their fatal tendency has been much stronger, and more difficult to be counteracted. The danger of the disease seemed, in these cases, to be chiefly proportioned to the degree of affection of the head. If the attack of the fever was accompanied by violent pain, soon followed by confusion of thought; if a blister was omitted to be applied to the neck or head early in the disease; and, above all, if the blister, when applied, produced no abatement of the headach and delirium, the disease has very generally proceeded to a fatal termination *. The reverse of these circumstances indicated, of course, a favourable event; and the medicines which seemed most efficacious were, in the early stage, antimonials given freely and frequently; and in the more advanced periods of the disease, opium with volatile alkali given in small doses, but at very short intervals; and the plan persevered in, without interruption, for several days. Emetics have appeared to mitigate the symptoms, but have in no instance cut short the disease: and upon the whole, these cases have borne a very strong resemblance, both in their general symptoms and in their fatality, to those which occurred during the hot weather at the beginning of May in the last year.

Greville-Street, May 23, 1801. T. A. MURRAY.

Art. 18. *Announcement of an extensive Medical Encyclopædia.*

SEVERAL physicians and surgeons in London have associated together for the purpose of writing An extensive MEDICAL

* Among these cases it is with sincere regret that I have to include that of my amiable friend and colleague Mr. Nelson, assistant surgeon to the Dispensary; who, after having for many years visited with impunity the infected habitations of the poor, has at length suffered from exposure to the contagion of typhus, and died on the eleventh day of the disease.

ENCY-

ENCYCLOPÆDIA; or, An Entire Course of the Modern Practice of Physic, Surgery, and veterinary Medicine: including the Outlines of Anatomy, Physiology, Hygiene, Pathology, Nosology, Therapeutics, Midwifery, Pharmacy, Chemistry, Botany, and medical Philosophy; with references to the most approved authors, and an explanation of technical terms: arranged alphabetically, and illustrated by numerous engravings. The whole work will be comprehended in two or three quarto volumes, forming a complete MEDICAL LIBRARY; and the names of the different practitioners engaged in this undertaking are to be announced in the Prospectus, which will speedily appear. We understand, that it is intended to annex the signature of each writer to his own articles, after the manner of the French Encyclopædia; and that the surgical department will be executed by *Mr. Blair*.—Communications for the Editor may be addressed to any of the following booksellers, viz. Mess. Longman and Rees, Paternoster Row; Cadell and Davies, Strand; Murray and Highley, Fleet Street; Vernor and Hood, Poultry; or Mr. Cuthell, Middle Row, Holborn.

Art. 19. *Notice respecting the Kilburn Water, and the Inoculation of the Cow-pox at Jamaica.* By Mr. BLISS, of Hampstead.

To the Editors of the London Medical Review and Magazine.

GENTLEMEN,

IN the last Number of your Review I signified my intention of sending you an analysis of the Kilburn mineral water, as an accompaniment to that which you then published of the Hampstead. But my avocations having prevented the completion of my experiments, I must request of you to give it a place in your next, that it may appear in the same volume with my former paper. I should not have taken this liberty, if there had not been an announcement on the cover of your Review, that no miscellaneous communications would be inserted after the present month.

I embrace this opportunity of informing you, that I have received a letter from my friend Mr. Rooke, at Savannah la Mar in Jamaica, dated March 16th, 1801, stating, (in addition to the notice contained in your last Number,) "that near ten thousand persons in that island have already been successfully inoculated with the vaccine virus, and that he was

then on an excursion into the country with a view of extending its benefits."

His introduction of this mild disease was peculiarly providential; for he says, that the negroes on Mr. Charles Ellis's estate, where he resided, "were at that time surrounded with the small-pox, and of a thousand not twenty had undergone the variolous contagion."

He further informs me, that the opposition he met with at its first introduction had nearly subsided; and that he was countenanced in its propagation by some of the principal members of the representation.

I am, &c.

Hampstead, May 26, 1801. JOHN BLISS.

Art. 20. *A Case of extensive Ulceration of the Rectum and Colon.* Communicated to Mr. BLAIR, by Mr. WILLIAM ASKWITH, Member of the Royal College of Surgeons in London, and late House-surgeon of the Lock Hospital.

SIR,

ACCORDING to your request, I transcribe from my notes a short account of the case of Susannah Bartlett, whom you admitted into the Lock Hospital on the 25th of October 1800.

This young woman passed through the ordinary course of mercurial inunction for her venereal symptoms till the 10th of November, when she was obliged to desist, on account of a complete obstruction in the rectum. She then had recourse to the pil. colocynth. ℥ß, and calomel pp. ℈j, made into a proper number of pills, all of which were taken in three days without effect. Two drachms of sal cathart. amar. were now given to her every other hour; but, as no alvine evacuation was thus produced, strong saline purgative clysters were next administered. No benefit being derived from these means, I passed large candles and bougies about seven inches up the rectum, at which part there was always felt an obstacle to their introduction. Tobacco clysters were also tried, but with no better effect. The pain in her loins and abdomen was alleviated by external fomentations.

November 25th—27th. Her sufferings were now aggravated by excessive sickness and thirst. Her pulse was feeble and frequent. Three stools were procured by common clysters, which afforded great relief: the first evacuation was very costive, the last two were liquid and very fetid.

27th

27th—30th. She took pills containing gamboge, calomel, and opium; but, having produced violent vomiting and griping pains, they were soon omitted.

December 1st—6th. Her abdomen now becoming very tense and painful, from air pent up in the bowels, the warm bath was tried; but, as she derived no benefit therefrom, aspersion with cold water was employed, which, for the first two or three times, afforded considerable relief by causing eructations, though, after that time, it lost its effect.

6th—11th. She took twenty drops of tinctura opii twice a day, having so much pain both in the stomach and in the direction of the colon, that she could not even exert herself enough to void her urine.

12th. At nine A. M. she discharged her urine with ease; at one o'clock she took half an ounce of crude quicksilver, which in an hour occasioned a very copious evacuation of both hard and liquid fæces, extremely offensive.

14th. She had the quicksilver repeated, which procured two more evacuations; yet she still felt great pain in the stomach, and vomited up every thing she took except some porter.

14th—19th. She had two stools each day, after the administration of clysters.

19th—27th. Had stools irregularly; and on the 26th was purged with a bolus of calomel gr x, and gamboge gr ij.

28th. She now complained of great pain in the epigastric and lumbar regions, accompanied with a tenesmus; for which she took opium.

December 28th to January 5th. She had stools irregularly. The cathartic bolus was repeated with advantage, yet the tenesmus was still troublesome, her abdomen tense and painful to the touch, with eructations; her tongue was clear and dry; pulse quick and small.

5th—15th. The use of bougies and candles was now laid aside, on account of the insupportable pain both their introduction and retention produced. Opiate clysters were the only bearable applications. On examination with the finger in ano, an irregular ulcerated-like surface was distinctly felt, with much thickening of the rectum.

15th—28th. The irritation in the rectum becoming now too great for her to bear even the introduction of the clyster-pipe, this mode of alleviating her sufferings was obliged to be dispensed with; and the tenesmus now became so violent, accompanied with so great a discharge of bloody feculent matter,

as to deprive her of sleep night and day, though she took large and frequent doses of laudanum.

January 28th to February 12th. She took as much extract. cicutæ as her stomach would bear, but to no avail; having to resort to the aid of opium internally as frequently as ever; and from this time she dragged on an existence of unutterable misery to March 9th, when she died in the extremest state of emaciation.

On opening into her abdomen, the omentum was found slightly adhering to the peritoneum lining the general cavity, but firmly adhering to the brim of the pelvis, so that it completely enveloped the small intestines, to which it also slightly adhered; but they firmly cohered to each other. The liver and spleen had also partaken of the inflammation, and adhered to the peritoneum. But the principal seat and apparent cause of all the mischief seemed to be in the colon and rectum, which externally were covered with coagulated matter in flaky masses, having the appearance of crude pus, of which about a teacupful might have been collected; but no ulcerated surface could yet be perceived. On slitting up the gut, the disease was then seen to extend from the rectum to the caput coli; the villous coat was much thickened, and, for the most part, destroyed by ulceration, particularly in the rectum and sigmoid flexure of the colon: so that in many places the muscular coat was completely exposed.

On account of the obstinate state of costiveness which had preceded this disease, it was suspected that a stricture had taken place about the sigmoid flexure of the colon; but the gut was found uniform in its diameter, though less than natural, and its coats preternaturally thick; from which we may justly conclude, that the irritation and consequent inflammation might in the living body have been the cause of the constipation, by keeping up an irregular contraction of the canal.

I remain, Sir,

Lock Hospital,
Hyde Park Corner.

Your obedient servant,
William Askwith.

Art. 21. *Account of a Dissection; with Remarks thereon.* By George Lee, A. M.

James Tarney, a labourer, aged 65, was admitted into the Pennsylvania Hospital on the 2d of December 1797, for a large tumour on the right side of the chest, which had made its

its appearance about fifteen months before. He could assign no cause for it, except that he had received, many years ago, a small wound upon the upper bone of the sternum.

The tumour being situated upon the right side of the thorax, extended from the second to the seventh rib, and from the cartilages of the ribs to within a small distance from their angles. The tumour was opened twice by Dr. Physick, and discharged, at both times, five pints of glare. He expectorated this glary matter, mixed with mucus, several days previous to his death; and could not lie in a horizontal position during that time, on account of the matter rising up into the trachea in such quantity as to threaten strangulation.—He finally died in a very easy manner, and at an unexpected time.—After death, the following were the appearances upon dissection.

The integuments which covered the tumour being removed, we found the pectoralis major entire; and, upon making a crucial incision into it, the cavity of the tumour was brought into view, which discovered to us a beautiful net-work of cellular membrane, passing from one side to the other, with a small number of blood-vessels ramifying through it. These cells were undoubtedly the cavities which contained the glare discharged by the operation before death. But the matter we found in them was of the consistence of tallow, and of a white appearance. In the centre of the tumour a small quantity of bloody puriform matter was found, and some of the originating slips of the serratus magnus anticus muscle were considerably deranged. No ribs were found within the tumour, except at its circumference, where small remains of them were to be seen, apparently in a half corroded state. The ribs which suffered the greatest obliteration were the third, fourth, and fifth; the sixth was partially destroyed.

The tumour was semispherical, resting on the pleura, which, in this place, instead of being convex externally, as it naturally is, was concave. No direct communication could be discovered between the cavity of the tumour and that of the thorax; for the pleura appeared entire and natural, except being a little indurated and puriform on its external surface. But that there had been a communication was evident from three circumstances: 1st, He threw up from the lungs, before death, the same kind of matter which was discharged from the tumour by the puncture; 2d, The matter flowed more freely during sudden respiration than in any other act of breathing; and, 3d, The matter contained in the tumour,

after

after death, very much resembled that found in the lungs, as will be mentioned presently.

The lungs seemed to be composed, as it were, of an immense number of tubercles, generally speaking, about three lines in diameter. They were white, or perhaps more strictly gray; firmer than tallow, and a little puriform in the middle. The left lung appeared as tuberculous as the right, and they both adhered very firmly to the pleura in every place, except to the pericardium, as much to the diaphragm and mediastinum as to the sides of the thorax. No trace from the wound he had received upon the sternum could be found.

Upon opening the abdomen, the first thing which attracted notice was the stomach. This viscus, which was very large, instead of being in its natural oblique situation, was found lying lengthwise on the left side, anterior to the spleen, and contiguous to the peritoneum, to which it adhered. The pylorus was curved up in consequence of its attachment to the duodenum, which intestine was in some measure displaced; probably by the weight of the stomach, when full, dragging it downwards. I once heard of the stomach being situated nearly in the same manner, but I believe such an appearance is seldom met with. A few remains only of the omentum were seen, which was to be expected from the emaciated state of the subject. The liver was much harder than it is found in a natural state, and appeared contracted. It adhered to the peritoneum. This is one and the most common kind of liver which persons who are intemperate in the use of ardent spirit often possess. I have seen many instances of it; and in such cases the liver is often whitish, and of a granulated texture. I once dissected an intemperate man, whose liver was granulated, or, to use a vulgar phrase, knotty, and so much contracted and hard, that it was with difficulty an incision could be made into it; and the noise the scalpel made in passing through it much resembled the cutting of dry soal-leather, the resistance only not being so great. The intestines were contracted, thickened, and tough—adhering very strongly to each other, and to the peritoneum, on each side of the spine, to the distance of at least four inches. The urinary bladder seemed tied in a preternatural manner to the pubes. This, as well as all the morbid adhesions we met with, were, no doubt, produced by inflammation. Some days after his death, I was informed, from good authority, that he had been very intemperate at different periods of life. No other diseased appear-

ances

ances were found worthy of notice; and I will now make a few remarks upon the case as it has been stated.

The disappearance of ribs is a fact which constitutes the most interesting part of the history of the foregoing case; and is one which, I think, does not admit of an easy explanation. We can easily conceive how nature removes fluid substances from different parts of the body; but how she carries off the more solid materials of which we are composed, is a phenomenon which, whilst it excites astonishment, and calls forth our admiration, keeps aloof every conjecture concerning the manner in which it is effected. We are all ready to believe that the absorbents are capable, either by capillary attraction or by a muscular power, of taking up effused fluids; but it is a difficulty, on the other hand, under which physiologists labour, to conceive how they absorb bone and other solids. It has been the prerogative of the ingenious, which right they have often exercised, to teach us, that before an absorption of the solids takes place, they are made fluid. But this is only creating one difficulty in order to solve another; for it is well known we have no proof on which to ground the assertion, however anxious we may be to make use of it. I do not mean, however, that the fact is not as some men would have it. So distant is my opinion from this, that I am disposed to admit something of that nature does take place. But until this doctrine is better supported by the evidence of truth, drawn from experience, few men of accuracy will give their assent to it. Yet, however averse we may be to reason on this interesting subject, on account of its abstruseness and difficulty, the fact still recurs to our view, and its presence commands that attention which is due to its importance. You will permit me to call your attention here to a few interesting facts relative to the present subject. The disease called molities ossium is owing to too great an absorption of calcareous earth from the bones. In proof of this, we have an interesting history, by Mr. Thomson, of a James Stevenson, "whose urine, during the two first years of his affliction with this disease, generally deposited a whitish sediment, which, upon evaporation, became like mortar." In this case, it is probable, the earthy matter, after having been absorbed from the bones by the lymphatics, was carried out of the system, by the action of the kidneys, in the secretion of urine. Mr. John Bell believes that mollities ossium is produced by an absorption of bone, and that during the continuance of the disease, earthy matter is discharged per urethram. Messrs. Cruikshank and Sheldon

Sheldon entertain the same idea of this disease. When a bone exfoliates, the decayed part is thrown off by an absorption of a portion of the living in contact with the dead. The alveolar processes of the jaws disappear in old people when the teeth fall out. Mr. Cruikshank mentions a case where the sides of the tibia were reduced to the thickness of a wafer; and I once attended a woman who fractured the bones of both legs, just above the ankles, by only stepping obliquely upon the edges of bricks. These cases, no doubt, arose from the absorption of the bones rendering them very weak. All the hollow cylindrical bones, and the cranium, during their growth, undergo an absorption as well as a renewal of their substance. Whilst the lymphatics are removing matter from their internal, the arteries are depositing new particles of bone upon their external surfaces. And, in this particular, the growth of a bone resembles that of wood, only that there is no absorption in the latter.

If there was no absorption during the growth of these bones, how could their cavities enlarge? and if new layers of bone were not formed on the external surfaces of them, how could they be extended? It is not only true that this is the course of nature during the growth of bones, but it seems very probable, that it is continued during life. That this reciprocal action between the arteries and absorbents does exist in every part of a bone during life, is rendered somewhat evident by one fact:—If an animal be fed upon madder, the whole substances of its bones will be coloured red by it, which tinge, in process of time, will vanish. In old people, the bones have lost a considerable sum of their former weight; which proves that the absorbents are more active at this period of life than the arteries. The various changes which the under-jaw suffers during life depend entirely upon the action of its lymphatics. A venereal node, which is owing to a swelling or increase of bone, will be absorbed by the lymphatics when stimulated by mercury. The surprising configuration of the bones of different nations has been derived from their peculiar customs. Thus, the use of a turban, according to Vesalius, produces in the Turk a conical skull; and the early employment of the chin-stay gives a flat head to the English. I some time since saw an Indian skull, found on the banks of the Mississippi, the top of which was raised in the form of a spine, running from before backwards, supposed to be produced by the application of two boards, during infancy, to each side of the head. Besides these facts, it is to be recol-

lected, that all the bones of the body yield to, and are impressed by, the contraction of a muscle, the beating of an artery, &c.

Besides these facts relative to the absorption of bone, I could, were it necessary, multiply them, as well as adduce many in proof of the absorption of the soft solids, which appears to me equally important and difficult of explanation with the removal of bone by the lymphatics. If the absorbing vessels destroy glands and other soft solids, which they certainly do, there is little doubt in my mind that they are completely adequate to the absorption of bone; for if it is necessary that bone should be previously dissolved by a secreted liquor, or any other, for that purpose, surely a muscle, &c. must undergo the same preparatory process. Yet, by the by, why are not the lymphatics as capable of removing or destroying bone as the arteries are of forming it? There is as much reason in the belief of the one as of the other; and from the number, variety, and importance of the facts in our possession, every person must in the end admit both, although he may not understand either.

That bone is a secretion from the arteries, is inferred from a variety of circumstances. This opinion, I believe, is said to have originated from the late Mr. Hunter, as well as the absorption of bone; of which last, the present Dr. Monro has endeavoured to establish himself the author. But if you examine a treatise on Human Osteogeny, by Dr. Nesbitt, you will find the first of these two opinions advocated in a very able manner. This ingenious man, who wrote and published in the year 1736 what he had read in the anatomical theatre at London in 1731, which was before the birth of Mr. Hunter, says he detected minute particles of bone in the extremities of the arteries, near the place of their destination. He supposes that small vessels, peculiarly appropriated for the purpose of ossification, pass off from arterial branches, and are continued on into the beginning of the vessels "prepared to receive refluent juices," as he expresses himself, by which vessels I suppose he means the returning veins. The "bony corpuscles," to use his own words, are formed in, and deposited by, these peculiar vessels, in parts which are intended to be bone. That bone is not derived from the condensation of cartilage, as is believed by some, is evident from the fact, that cartilage does not contain any calcareous earth. The origin of this opinion is probably from the circumstance of bone being oftener formed in cartilage than in other parts;

but it is not peculiar to cartilage. I once dissected a man, in company with the late Dr. Cooper, one of whose testes was largely os-ified. Dr. Donald Monro relates the dissection of a woman, in whom a number of the mesenteric glands were found ossified. A number of similar observations we find in Schenkius. Mr. Watson discovered, in dissection, that part of the heart which lies upon the diaphragm ossified; and says he has in his possession a preparation in which osseous matter is scattered over both heart and pericardium. A more striking instance of the ossification of the heart is mentioned by Mr. Guest. Instances of the ossification of the arterial system, in old people, are so familiar, that it would be needless to mention one. The figure of a bone is described by Mr. Cheselden, which was taken from the falx of the dura mater of a man who died of headach. A small ossification was found on the inside of the dura mater, near the falciform process, in old Bayles, who was supposed to have been 130 years old, by Dr. Keil. A similar case is mentioned by Mr. Paisley. Even the brain itself has been found ossified; a case of which is mentioned by Duverney, in Memoires Acad. des Sciences for 1703, as quoted by Whytt. Mr. Henry has recorded the case of William Carey, part of whose muscular system took on a surprising process of ossification. The ossification commenced at his wrists and ankles, and continued up to his elbows and knee, so as to put on the appearance of compact masses of bone. He had no use of the parts.—So much disposed is the animal body to become ossified, that we find, in the Philosophical Transactions, an account, by Dr. E. Tyson, of the tendons of a fowl, the external membrane of the liver of a human body, as well as the outside of the spleen and lungs, having been found in a state of ossification.

Many deviations of this kind, from the regular course of nature, in the formation of bone, might be adduced; but those I have mentioned are sufficient to shew that cartilage is not the exclusive seat of ossification. The bones of the cranium are originally formed between membranes. Neither does bone depend upon the presence of periosteum for its formation, as Du Hamel maintained: for, not to mention that all our bones almost are produced before the periosteum is, they will form a callus, and be removed where their natural covering is abraded. The fact appears to me to be strictly this: when a part undergoes the ossific process, it only serves as a bed or matrix for the bony fibres to shoot in, and be supported. It is very probable that the cartilage is better suited to this

purpose

purpose than any other substance in the body. During the process of ossification, the parts in which it takes place disappear, in consequence of being absorbed as fast as the bone is formed, and is capable of supporting itself alone. This is proved by cutting an ossifying cartilage into pieces, and macerating them in water till the blood-vessels rot, and the portion of bone which has been formed, will drop out spontaneously, leaving a vacuity in the cartilage, corresponding exactly to the size of the bone.

Another proof that the arteries are the instruments of ossification is, that immediately before bone is formed in a part, that part uniformly becomes very vascular. This is very remarkable in the cartilage of the patella.—I am so much convinced of the truth of this doctrine, that I am disposed to extend it to the production of other parts as well as bone. Indeed, without the arteries are the agents by which all parts of the animal machine are generated, I am ignorant of the manner in which their origin is to be explained. Ever since the wonderful injections of the celebrated Ruysch were performed, respect for this doctrine has been increasing daily; and the arterial system is now considered the most eminent in its nature, and the most important in its function, of any other system in the body. The extreme vascularity of glands has induced physiologists to believe that the secretion of fluids is performed by vessels. The chyle does not possess the properties of blood until it has been acted upon by the blood-vessels, although it may have been partly animalized by the lacteals; and it is from the conveyance of this blood, when formed by the vessels which contain it, that every part of the body derives nourishment, regeneration, and an extension of life.

There can be no doubt that the filling up of cavities by granulation depends solely upon an elongation of vessels: for, if an injection be thrown dexterously, and with some force, into an artery which passes to an ulcer, the injection will ooze out upon the surface of the granulations. In the same manner, I believe, it is that the renewal of every part of the body is effected—bone, integument, tendon, cartilage, &c. as well as the vessels themselves. But it is a circumstance worthy of remark, that the same vessels do, so wisely and discriminately as it were, secrete substances so totally different in their nature and use as these just mentioned, according to the calls of nature. But we find this is not always the case; for instances have been mentioned, where parts which were not intended to be bone have become ossified.

The last proof I will mention of the secretion of bone by arteries, is connected with inflammation, which is a fruitful source of instruction to us on this subject. The proximate cause of inflammation consists in an increased action of the blood-vessels. This action is entirely confined to the arteries, and not to the veins; and in whatever part of the body it may exist, it is the same disease. This inflammation, unless subdued by art, is always terminated by the effusion of some kind of matter, which effusion is thrown out from the extremities of the arteries. The nature of the effused matter varies according to the nature of the part into which it is thrown. This is particularly evidenced by the regeneration of parts. If a tendon is divided, the ends of it are agglutinated together by the effusion of tendinous matter from the inflamed arteries. The knitting of broken bones depends upon the same principle. In the venereal, and other diseases, the bones are sometimes attacked with pain, heat, and other symptoms of inflammation, which, in the ordinary time, are terminated by the effusion of bony matter, which constitutes nodes and exostoses.

From a view of what has been said, it would seem that the arterial and lymphatic systems act in opposition to each other during life, and that when one takes an action paramount to that of the other, disease is the consequence. It is from the irregular action of the arteries, most commonly, that disease arises, as it is but seldom the lymphatics absorb an undue quantity of matter. Of the two systems of vessels, the absorbents appear to be the most regular in their function. Thus, whilst we observe the arteries evolve the different parts of the body in an abundant, and sometimes in an indiscriminate manner, the lymphatics mould, or give them their proper figures, by carrying off the superfluous and misplaced arterial productions; and it is to the absorbents alone that man (in whom elegance of structure is so prominent) is indebted for the form of his bones, and for the general configuration of his body.

Mr. Hunter supposes that the absorbents have a power similar to that of a caterpillar eating up the leaf of a tree; and believes that they elongate themselves, or shorten themselves, as their object recedes or approaches nearer. But this opinion is less satisfactory than some others; for who can conceive of a soft vessel, such as an absorbent, being able to tear away the hard substance of bones? No:—such an opinion as this cannot last long; and although I cannot broach a more plausible and inviting doctrine, I must content myself at present with the following remark, which appears to be

so

so well grounded, that I suspect it will outlive all the theories to be formed for an age to come: The actions of the absorbents are as much forced as those of any other parts of the animal body. The stimulants which support and keep in action the powers of the absorbents are numerous, and may be either of a mechanical or specific nature. Pressure is the most common mechanical stimulant to the absorbents; hence we discover the traces of it upon the bones. The destruction of ribs, in the case of James Tarney, was probably owing, in the first instance, to the pressure of the tumour upon them. A case is mentioned by Dr. Donald Monro, in which the pressure from a tumour of the brain made a hole in the os frontis. Mercury, digitalis, squills, and even the contents of the absorbents, are all particular or specific stimuli to them: and, unless some of these stimulants influence the lymphatic system, it becomes inactive, which state will be uniformly indicated by disease.

Art. 22. *Notice of some Cases supposed to be injurious to the Cow-pock Inoculation.* By Mr. Pears.

To the Editors of the London Medical Review and Magazine.

Gentlemen,

As many reports have been circulated injurious to the cow-pock inoculation, founded upon a case of vaccine inoculation that has lately happened in the Strand, where a child was said to have received the small-pox after cow-pock, I beg leave to transmit the following particulars, not only to shew the fallacy of those reports, but to prove how exactly contrary the result has evinced this case to be, in support of what it was intended to destroy; and for the truth of the following statement I am happy to acknowledge my obligations to Mrs. A. who favoured me with it: informing me, that on the 28th of October 1800, her three children, Caroline, aged 4 years, John, aged 2 years, and Sophia, 6 months, were inoculated for cow-pock by Mr. P. with matter obtained from the Cow-pock Institution in Warwick Street, where Mr. P. had left his lancets for the purpose of being armed; and receiving them thence, on the next day, sealed, as usual, he brought them to Mr. A.'s, and inoculated the children. Caroline and Sophia had no pustule arise, nor any trace of infection, the lancet mark being crusted in a few days, with only a slight red mark from the puncture.

John had his arm inflame; a pustule arose, and proceeded

as in the usual way, as to the maturation, encrustation, duration, &c. He was then placed at nurse; and the inflammation continuing, without being fomented, increased, and required some attention for nine or ten weeks.

On the 24th of December (two months afterwards) Sophia had an eruption of small-pock, which turned on the eighth day, and proved of a very fine kind. Caroline caught this of her sister, and also communicated the disease to the child of a Mr. H. They all recovered. John did not receive the infection.

It is necessary here to observe, in justice to the cow-pock inoculation, that when a practitioner was requested to see the eruption on Sophia, he immediately pronounced it small-pock, and wished to advertise the case, as a proof of small-pock occurring after cow-pock; but Mrs. A. knowing him to be averse to the vaccine inoculation, very properly, and with most becoming energy, represented to him the impossibility of forming an accurate opinion, as he had not seen the former inoculation. It is therefore much to be lamented, that such unfair means should be employed to discredit an important acquisition, and that prejudice should be suffered to usurp the place of truth.

From the history of this case it sufficiently appears, that two of the children did not receive the inoculation, and therefore remained in the same state of susceptibility for small-pox as before, and that the one who did receive it, was completely secured from variolous infection by the preventive power of cow-pock. It does, therefore, prove the very reverse of what was so falsely, and, it may be said, maliciously, designed. The extent and continuance of the inflammation is not here any objection to the vaccine inoculation, because it might and would have been prevented, if the proper means had been timely employed. This is so simple, and so usual, that a common poultice, or fomentation of warm water, generally removes every difficulty.

We may, therefore, add this one to the number of idle and false reports which have been raised to discredit cow-pock, and which have most effectually succeeded in recommending and establishing it on a firm basis. Of this I could adduce many more instances, but shall only add at present, that

Rockingham Row, I am your humble servant,
Newington Butts, C. PEARS.
May 26, 1801.

Note. Another case, which has been adduced against the cow-pock inoculation, happened at Mr. Bagshaw's in the

Strand. He lost a child by the small-pox, who had never been inoculated for the vaccine disease: but some persons, either through ignorance or malice, propagated a report that this child "had died of the cow-pox;" and the pretended disaster was urged very forcibly as an objection against that disease, in a family where the writer of this *note* had inoculated an infant.

*** *Mr. Blair's contributions are unavoidably omitted.*

MANY persons of the highest character in the medical world have repeatedly expressed their wishes that the two monthly medical publications, viz. The London Medical Review and Magazine, *and* The Medical and Physical Journal, *might be confined to objects essentially different—so that the peculiar wishes of their various readers might be completely gratified, and the plan of each of these works in no respect interfere with the other. An arrangement has, therefore, at length been made; which, although attended with some concession on the part of the* London Medical Review and Magazine, *will not fail to add to the worth and importance of this work, in that department which hitherto has been allowed to excel every other contemporary publication. It is proposed to confine the objects of this Review* solely to the critical Analysis of new Books on Medicine, Surgery, and their collateral branches; *and by the copiousness of the extracts and articles of criticism, to render the work a truly interesting repository of facts, experiments, and reasonings, connected with the Healing Art.*

To

To admit of this arrangement, it has been determined, with all due respect and deference, to recommend our friends and correspondents in future to address their favours to the Editors of the Medical and Physical Journal; *who, we are authorized to say, will treat with attention every respectable communication that may be addressed to them by those gentlemen who have hitherto transmitted their favours exclusively to us. In thus taking leave of our correspondents, we return them our grateful acknowledgments for the preference with which they have honoured our publication; and we assure them that our regrets have only been mitigated by the hope we entertain of adding to their future gratification, by the increased value and uniformity of the work which they have been pleased to adopt.*

The London Medical Review *will continue to be regularly published, at the usual price, on the first day of every month; and as it will be a particular object with the conductors to review every book as soon as possible after its appearance, all authors are invited to send to the publisher or printer a copy of their Works, immediately on their completion at press. The series of this Review from its commencement, in consequence of reprinting some of the early numbers, may be had of every bookseller, in five volumes, price* Two Pounds Eight Shillings, *in boards, or any former number may be had separately, price* Two Shillings. *The Sixth Volume will be completed on the first day of July, and the Seventh at the end of the present year: after which, two additional volumes, each comprising six monthly numbers, will be published annually.*

THE

LONDON MEDICAL REVIEW

AND

MAGAZINE.

VOL. VI. N° XXIX. JULY MDCCCI.

ANALYSIS OF BOOKS.

ART. I. *An Epitome of Chemistry, in three Parts. Part I. Intended to facilitate, to the Student, the Acquisition of chemical Knowledge, by minute Instructions for the Performance of Experiments. Part II. Directions for the Analysis of mineral Waters; of Earths and Stones; of Ores of Metals; and of mineral Bodies in general. And Part III. Instructions for applying chemical Tests and Reagents to various useful Purposes.* By WILLIAM HENRY. Small Octavo. 216 pages. JOHNSON, London. 1801. Price 5*s*.

THOUGH a great number of elementary chemical works have appeared of late, we think that the present will be found highly useful, particularly to such as study chemistry in the country, and have not had the opportunity of attending lectures, or seeing experiments. The chemical talents of Mr. W. Henry, as well as of his father, are well known; both of them have given lectures on this science in the town of Manchester, which have greatly promoted the progress of the manufactures, and both have enriched the Philosophical Transactions, as well as those of the Society of Manchester, with ingenious memoirs. The elder Mr. Henry was the first who introduced the doctrines of Lavoisier to the English reader, in

a publication entitled "Essays Physical and Chemical, by M. Lavoisier, translated from the French."

The work before us, the author modestly calls "one of humble pretensions;" yet its plan and objects appear sufficiently distinct from those of every other compendium of chemistry, to authorize the addition of one more to the extensive list of elementary works. "The chemical Pocket Book of Mr. Parkinson," the author observes, "and the description of a portable chest of chemistry, translated from the German of Gottling, and published in the year 1791, might, perhaps, from the similarities of title and size, be supposed to have precluded the necessity of this publication. A very cursory comparison, however, of Mr. Parkinson's work, with this manual, will evince, that the plan and objects of the two books are totally different. To the work of Mr. Gottling, the present bears, indeed, a nearer resemblance; but the coincidence is not such, as to supersede the utility of this epitome. The enumeration of tests for mineral waters; the instructions for applying these reagents; and the rules for detecting adulterations, are subjects common to both. But the progress of chemical knowledge, during the last ten years, has been so rapid, as to enable me to make numerous additions to the information of Mr. Gottling; and induce me materially to vary the arrangement, under which it was offered. It may likewise be added, that the ancient nomenclature of chemistry, employed throughout Mr. Gottling's work, must render it nearly unintelligible to students of the reformed system."

The arranged series of experiments was suggested as proper for publication, by a written catalogue, which the author drew up, more than two years ago, of the experiments performed during his course of chemical lectures. This he thinks it necessary to state, because something similar is to be found in Bouillon La Grange's excellent manual lately published.

Another object proposed to be fulfilled by this epitome, is, that it may serve as a companion to the collections of chemical substances, which the author has been induced, by the repeated applications of students in this science, to fit up for public sale. The utility of these collections, he observes, has hitherto been limited, by the want of a concise, but comprehensive code of instructions for their use. With the concurrent aid of the first part of this work, and of a corresponding chest of chemical reagents, the labours of the student must undoubtedly

doubtedly be facilitated; for one of the principal difficulties in studying the science experimentally, is the acquisition of a great variety of substances, many of which are not easy of attainment. The directions for analyzing waters, and mineral bodies in general, have corresponding collections of chemical tests, of so small a bulk, as to add in the least possible degree to the incumbrances of the traveller.

The author begins his work with advice to persons who are entering on the study of chemistry, and his directions are addressed peculiarly to those, who have not the opportunity of attending chemical lectures; and who have no other means of acquiring a knowledge of chemistry, except from books, and the evidence of experiments. Among the elementary books proper for a student, he particularly recommends that of Lavoisier. The first part of this work, comprehending the more general doctrines of chemistry, should, he observes, be perused with attention, and clearly understood, before the reader proceeds any farther. It may even be necessary, that, previously to the remainder of this work, he should study other elementary books, such as those of Chaptal, Fourcroy, and Nicholson. These works will supply the deficiencies of Lavoisier's Elements, especially on the subject of chemical affinity, the divisions and laws of which are essential to be known, as the groundwork of all chemical explanations. After having made himself master of the more general truths in chemistry, as delivered in the first part of Lavoisier's and the first volume of Chaptal's Elements, and also of the principles of the new nomenclature, the student will be qualified to reap advantage from the performance of experiments. In repeating these, he may either follow the order here pointed out; or he may assume, as the basis of his arrangement, the general propositions laid down by Chaptal or Fourcroy.

In conducting experiments, the author very properly recommends great attention to neatness and order. "Let every jar or vial," he observes, "have a label fixed to it, denoting the substances it may contain, (except in cases, where the nature of the contents is evident from mere inspection,) and the date and object of the experiment. I would caution the student not to engage in many different experiments at once; the consequences of which are, that the attention is distracted, and that many interesting changes pass unnoticed. It will contribute to form a habit of accurate observation, if the appearances that occur in experiments, be regularly and distinctly noted down: and such an exercise will tend, also, to

facilitate the acquirement of the art of describing chemical phenomena, to do which, with selection and precision, is far from being an universal talent.

"In advising an attention to neatness, however, I am far from recommending a frivolous regard to show, or even too scrupulous a nicety about the appearance of apparatus. With the aid merely of Florence flasks, of common vials, and of wine-glasses, some of the most interesting and useful experiments may be made; and in converting these vessels to the purpose of apparatus, a considerable saving of expense will accrue to the experimentalist."

After premising these very useful directions, our author proceeds to give an arranged series of experiments, which should either, wholly or in part, be performed by the student of chemistry. He first proceeds to illustrate chemical affinity, solution, &c. In the second article he considers the properties and effects of heat or caloric; caloric of temperature; uncombined caloric; combinations of caloric, with the cause of fluidity, and vapour. In the third article he examines the nature of gases in general, and points out the necessary apparatus, and the manner of transferring and making various experiments with gaseous bodies, in a very clear and simple manner. In the fourth article he proceeds to the examination of oxygenous gas; first pointing out the different substances from which it may be procured, and the methods to be used in disengaging it: he then enumerates its properties, each of which he illustrates by well-contrived and striking experiments. In the fifth article an account is given of azotic or nitrogen gas. He next proceeds to the examination of atmospheric air, of hydrogenous gas, and of the composition and decomposition of water. While on this subject, Mr. H. describes a number of analytic and synthetic experiments, many of which may be easily performed, and which place in various and striking points of view, this important part of chemistry. Among the various modes of effecting the decomposition of water, Volta's galvanic apparatus is mentioned and described. The properties and effects of water are next examined; and under this head the interesting phenomena of solution are pointed out and explained. After this follow the alkalies, and the general properties of acids; then carbon, carbonic acid, and their compounds; sulphur, sulphuric acid, and their compounds; azote or nitrogen, nitric acid, nitrous gas, nitrous oxyd, and nitrates; muriatic acid and its compounds; oxygenated muriatic acid, oxygenated muriate of potash, and soda. In speaking of the

decomposition

decomposition of ammonia by the oxygenated muriatic acid, the author observes, that this property of ammonia renders it extremely useful in correcting the offensive vapours of the oxygenated muriatic gas, which are sometimes accidentally set at liberty in places where it is prepared. And when suffocation threatens to come on, in consequence of the fumes of this acid, the most effectual remedy is, to hold a stopper, moistened with ammonia, to the mouth and nostrils.

Phosphorus, phosphoric acid, and their compounds, are next examined; then follow the boracic acid, and its compounds; after these the earthy and metallic substances. A short, but perspicuous account of vegetable and animal substances concludes the first part of this work, which may be called the elementary part, and is certainly well calculated for the student of chemistry, particularly for those who study without an instructor.

The second part is practical, and may be consulted both by the student and the proficient. It contains directions for examining mineral waters, and mineral bodies in general. The complete and accurate analysis of mineral waters, "and of mineral bodies in general, is," our author properly observes, "one of the most difficult subjects of chemical manipulation; and requires a very extensive acquaintance with the properties and habitudes of a numerous class of substances. Long and extensive study of the science is, therefore, essential to qualify any one for undertaking exact and minute determinations of the proportion of the component parts of bodies. Such minuteness, however, is scarcely ever required in the experiments that are subservient to the ordinary purposes of life; a general knowledge of the composition of bodies being sufficient to assist in directing the most useful applications of them. I shall not attempt, therefore, to lay down rules for accurate analysis; but shall only describe such experiments, as are suited to afford an insight into the kind, but not to decide the exact proportion, of the constituent principles of natural waters, and of mineral substances in general."

In the analysis of mineral waters, Mr. H. describes the different tests, the methods of preparing them, and the mode of employing them. He then gives a table of the substances that may be expected in mineral waters, and the means of detecting them; and lastly points out the mode of analysis by evaporation.

In his analysis of minerals, he points out the method of examining a mineral, the composition of which is unknown;

and then proceeds to the analysis of salts, earths, and stones; inflammable fossils, and ores of metals in the moist and dry way. The directions he gives are in general very judicious.

The third and last part contains the application of chemical tests and reagents to various useful purposes. This part is divided into five sections: 1. Method of detecting Poisons—2. Rules for ascertaining the Purity of chemical Preparations, intended for the Purposes of Medicine, or for other Uses—3. Use of chemical Reagents to Artists and Manufacturers—4. Application of chemical Tests to the Uses of the Farmer and Country Gentleman; this comprehends the analysis of marls, limestones, and soils—5. Miscellaneous Uses of chemical Reagents.

In the third section, on the Use of chemical Reagents to Artists and Manufacturers, the author observes, that to point out all the beneficial applications of chemical substances to the purposes of the arts, would require a distinct and very extensive treatise. All that he pretends to do in this place, is to describe the mode of detecting adulterations in certain articles of commerce, the strength and purity of which are essential to the success of chemical processes. The modes of detecting the adulterations of potashes, pearlashes, and barilla, as well as magnesia, are pointed out.

In the fifth section, on the miscellaneous Uses of chemical Reagents, the best methods of removing ink stains, fruit and wine stains, as well as spots of grease, are described.

The work is concluded by a list of elementary books on chemistry.

Upon the whole, though this Epitome of Chemistry may contain but few facts that are new, which indeed, from its nature, we should not be led to expect; it seems very well calculated to answer the purposes intended. The first part, in particular, we can recommend to the chemical student.

Very few omissions of any importance appear throughout the work. One or two have occurred to us, which the author may probably supply in a subsequent edition; in particular, no notice whatever is taken of the article *tannin*, the existence of which, as a distinct chemical principle, seems to be fully established; and in speaking of sulphate of alumine, he makes no mention of the alkaline salt, which is a necessary ingredient in its composition.

ART. II. *Practical Observations on the Cure of the Gonorrhœa Virulenta in Men.* By THOMAS WHATELY, Member of the Royal College of Surgeons in London. Octavo. 119 pages. JOHNSON, London. 1801. Price 2*s.* 6*d.*

THE first pages of the work before us are occupied in combating an opinion which has been supported by Mr. Benjamin Bell, that the poison of the gonorrhœa and lues venerea are essentially different, and proceed from different contagions. The author is of opinion that these two diseases are perfectly similar in their nature, and only differ from each other "in the different action of the same virus affecting different parts"—"Were they of the same nature," says he, "is it not surprising, that these different poisons should so frequently exist at the same time, and in the same part, and as it were in contact with each other, as must happen when a gonorrhœa and a chancre take place together in the urethra? This heterogeneous conjunction is so contrary to the general laws of nature, with respect to other poisons, that Mr. Bell's opinion carries with it, at first sight, the appearance of very great improbability. A few instances indeed may occur, of two distinct infectious diseases existing together in the same person, as the itch and lues; but one of these is in the blood, the other a local disease of the skin. Or should it be believed, that these diseases may be combined together, and form a new poison, called the sibbens of Scotland; even this has nothing analogous to the hypothesis of Mr. Bell. In short, I believe, it will be very seldom found, that any two different poisons, such as the small-pox and the measles, are capable of communicating, at the same time, two diseases specifically different from each other."

The author to his own experience adds that of Sir William Fordyce, Mr. Hunter, Dr. Monro, and Dr. Swediaur, in order to prove that a simple gonorrhœa has, in numerous instances, produced a confirmed lues; he thinks, too, that, contrary to the opinions of Mr. Bell and Mr. John Hunter, the evidence is decidedly in favour of the good effects of mercury in gonorrhœa.

With regard to the seat of the gonorrhœa virulenta in men, and the appearances produced by it in the urethra, the consideration of which occupies the second chapter, the author coincides with the opinion of modern surgeons, in considering its existence to be generally within two inches of the extremity of the urethra; that its discharge is produced by an inflammation

mation excited by the action of the venereal poison on the inner membrane of the urethra; and that the presence or absence of chordée, ardor urinæ, &c. arise from a difference in the degree of inflammation, and from an erosion of the surface of the urethra in such cases. In general no ulceration takes place; sometimes, however, though rarely, such a circumstance occurs. In some cases the author has seen ulcers at the extremity of the canal; and in others he has been led to infer their existence, from the hardness of the parts, the violence of the inflammation and discharge, and from finding the disease yield to no remedy but mercury.

There is a considerable difference, he observes, in the depth to which the poison penetrates in gonorrhœa; being deeper where much chordée and ardor urinæ exist, than where there is only a moderate yellowish discharge. "As the spurious or external gonorrhœa is a disease of a very similar kind to that which is seated in the urethra, we may, with great propriety, illustrate by it some of the varieties of the latter disease. Sometimes the gonorrhœa spuria is attended with large and deep ulcers upon the prepuce or glans, with much inflammation and hardness; at other times with those which are small, and with a less degree of inflammation and hardness. In some cases the poison inflames the tender skin and subjacent parts of the glans and prepuce, to such a depth as to thicken and enlarge them, but without producing distinct ulcers. In all these affections a considerable secretion of a greenish or yellow pus takes place. In other cases the excoriation of the surface is merely superficial, and without any thickening; the inflammation is also so slight as to occasion a smaller secretion of pus, of a lighter colour than in any of the other kinds of this disease."

The gonorrhœa virulenta in general affects the urethra partially, either in irregularly shaped patches, or in distinct inflamed spots, which secrete the poisonous matter: similar appearances are more distinctly seen on the glans or prepuce in gonorrhœa spuria. Concerning the *nature* of the venereal matter, the author's observations have convinced him, "that the strength, activity, or concentrated properties of this poison, are greater before it has undergone a circulation in the blood, than after it has mixed with it; and that, on this account, it will generally require a larger quantity of mercury to destroy it in the former case than in the latter." The poison of the lues, he thinks, "in any of its forms, may more frequently be destroyed by mercury, given alteratively and in small quantities,

than

than the poison of a chancre;" for "a lues venerea," according to Mr. Hunter, "shall in many cases be perfectly cured before chancres have made the least change."

In considering the treatment of gonorrhœa, the author divides the disease into three different species:—"First, The gonorrhœa attended with ulcer in the urethra, or with a considerable induration of the lips of its orifice, and of a portion of the corpus spongiosum adjoining, but without any apparent ulcer; these appearances being for the most part attended with a chordée, and ardor urinæ, to a greater or less degree.

"Secondly, The gonorrhœa attended with a chordée and ardor urinæ, with other marks of a considerable inflammatory affection of the urethra and penis, but without any appearance of ulcer, or great induration of the lips of the orifice of the urethra, or of the corpus spongiosum.

"Thirdly, The gonorrhœa unattended with any of these circumstances, its chief symptom being a small purulent discharge from the urethra."

All practitioners, he observes, are agreed in employing mercury in the first species of this complaint, where ulcers or chancres take place in the urethra, or where there is a considerable induration in the substance of it. And, in the second species of gonorrhœa, mercury will generally effect a cure, if given in doses similar to those which are necessary for curing chancres, so that the mouth be kept sore for ten days or a fortnight. The preparations of mercury which the author employs are, either calomel, the quicksilver pill, or calcined mercury, with or without opium; and he adduces the authority of Sydenham, Robinson, Turner, Chapman, Sir William Fordyce, Heister, Swediaur, and Monro, to establish the propriety of its exhibition. He considers the doctrine of the good effects of mercury in gonorrhœa as confirmed, by the cases brought forward by Mr. Addington, in the Contributions to medical Knowledge published by Dr. Beddoes; for, in those cases, the symptoms of the disease were stated to be generally relieved, in the course of twenty-four hours, by a few doses of one grain and a half of muriated mercury, dissolved in half an ounce of rectified spirit of wine, taken alternately with doses of Glauber's salts. "The relief," our author says, "obtained in the cases related, was, in my opinion, entirely owing to the absorption of large doses of this preparation of mercury into the circulation, and its immediate action on the venereal virus. If a person under this disease be desirous of a speedy cure, let him rub in a large quantity of mercurial ointment upon the

thighs; or take internally large and repeated doses, either of calomel, or any other mercurial preparation, so as to introduce into the circulation a quantity of active mercury, equal to that which existed in the sublimate used in the cases above mentioned: in short, let him only excite a sufficient degree of mercurial action in the habit, and, as I have in many instances seen, the same benefit will accrue in as short a space of time." Mercury, however, he adds, should not be given while there is any considerable inflammation or inflammatory diathesis present.

After mercury has produced all its good effects in this species of gonorrhœa, a puriform and highly infectious discharge often remains; which the author thinks may be owing to a portion of the poison occupying the urethra, but so superficially as not to be affected by the mercury introduced into the circulating system. Such a discharge, he is of opinion, is only to be cured by mercurial injections.

The strength of mercurial injections must depend much upon the constitution of the patients employing them. Muriated mercury and calomel are the two preparations which the author has been in the habit of prescribing as their basis. In using a solution of the former, which he regards as the neatest and best, he first dissolves it in rectified spirit of wine, in the proportion of one drachm to an ounce of the spirit; and begins with two drops of this solution to four ounces of rain or distilled water. Should this strength not be sufficient for removing the complaint, after having been used for a week or ten days, he increases it gradually, by the addition of two drops every week, till the quantity of the spirituous solution in the same quantity of water has been augmented to about twenty drops.

When calomel injections are employed, the quantity of calomel at the commencement should be in the proportion of ten grains to three ounces of water and one ounce of mucilage; but this may be gradually increased till the calomel be in the proportion of one drachm to the same quantity of fluid.

In cases where the discharge from the urethra has not been stopped by a mercurial injection, of the strength which seemed to be suited to the constitution of the patient, the author has found advantage from adding, to four ounces of the above injections, four grains of vitriolated zinc; and where there is reason to suspect any disease of the habit, he recommends Peruvian bark, a generous diet, country air, and in some cases the cold bath, as auxiliaries. It sometimes, however, happens,

pens, that the discharge is kept up by the stimulant power of the injection alone.

On the occurrence of a hernia humoralis, or an inflammation in the neck of the bladder, the discharge from the urethra, and the ardor urinæ, &c. generally abate, and sometimes cease entirely for a time. "In these cases the inflammation only, and not the venereal poison, is translated to a neighbouring part; the latter is not expelled from the urethra, but, for want of its accompanying inflammation, it is in a great degree inactive. As soon, however, as the new inflammation is removed, the gonorrhœal virus shews its activity again, by producing a fresh irritation, and secretion of pus from the urethra, although generally in a much less degree than before: nor is this secretion often attended with that violent inflammation, or with the chordée and ardor urinæ to the same degree, which took place at the commencement of the disease; the latter of these, on the contrary, in many cases, do not return at all." For removing those accidental symptoms he recommends the usual antiphlogistic remedies.

After some observations on the analogy of the effects of mercury given internally, or used in injection, the author gives it as his opinion, that, from the rarity of the occurrence of lues from gonorrhœa, we may generally with great safety trust the cure to mercurial injections, without subjecting the patient to an unpleasant and inconvenient course of mercury: he therefore recommends the plan which he pursues of curing gonorrhœa by injections alone, without the internal use of mercury.

The zincum vitriolatum has been frequently employed, but Mr. Whately is averse to its use, on account of its seldom, in the most favourable circumstances, being able to stop the discharge entirely, and, in some cases, being evidently of great disadvantage, by suddenly checking that flow of purulent matter which was intended to unload the turgid and inflamed vessels. Incurable gleets and strictures he believes have also sometimes derived their origin from its employment; so that he is inclined, on the whole, to deprecate its use, and to consider it as a medicine which has done more mischief than any other since the time of Hippocrates!

The author would not employ injections at all in the early and inflammatory state of gonorrhœa. His intention is first to moderate the inflammatory symptoms, such as the ardor urinæ, chordée, &c. by the various antiphlogistics, and then to remove the topical affection of the urethra by mercurial injec-

tions, used in the manner above mentioned. Where the discharge remains a long time, notwithstanding the employment of injections gradually increased in strength, he advises the exhibition of mercury internally. It must always however be recollected, that we should begin with injections which are so weak as not to irritate. The bals. copaivæ he has not found of much service in any species of gonorrhœa: the discharge invariably returned on leaving it off, although used for a considerable period.

The author illustrates his observations on the cure of gonorrhœa, by giving two tables of the comparative effects of injections with muriated mercury and calomel, in different quantities, for the removal of that disease.

We shall here copy his remarks and tables:

"These lists are inserted for the sake of furnishing younger practitioners with an experimental standard, by which they may in some measure determine the required strength of an injection. The cases, to which these lists refer, were chiefly gonorrhœas of the second and third species; but, for want of minutes taken at the time, I cannot now tell how many of them belonged to the former, and how many to the latter. In some of the second species mercury was given internally, according to the plan laid down in the fourth chapter; in others the cure was obtained by injections only; and some, both of the second and third species, were cured with the vitriol of zinc added to the injection.

"*Cured by Injection of muriated Quicksilver.*

"Cured with number I.	86
Ditto II.	101
Ditto III.	58
Ditto IV.	134
Ditto V.	47
Ditto VI.	37
Ditto VII.	16
Ditto VIII.	14
Ditto IX.	4
Ditto X.	3
	500

"*Cured*

"*Cured by Injections of Calomel suspended in Water by the Mucilage of Gum Arabic.*

"Cured with ten grains of calomel, to three ounces of water, and one ounce of mucilage	13
"Ditto, with twenty grains of calomel, to the same quantity of water and mucilage	47
"Ditto, with forty grains, to ditto	48
"Ditto, with one drachm, to ditto	12
	120"

This work is closed with a chapter on the venereal gleet; but as the author considers this as simply an uncured gonorrhœa, he refers to the former part of his observations for the treatment likely to remove it. The "venereal poison," he asserts, from his own experience, and the testimony of several respectable authors whom he quotes, "may remain in the urethra, in almost an unaltered state, for several years together." Where mercury, used by injection and internally, proves insufficient to remove the venereal gleet, Mr. Whately recommends the bark, cold or sea bathing, and the country air.

The silence we have observed respecting some of the author's sentiments, is not to be considered as an acquiescence on our part in all he has advanced; but, as it would have led us into too wide a field of argument to have attempted a full refutation of what we believed to be erroneous or doubtful, and might have induced us to give a less complete analysis of the work, we deemed it proper to leave Mr. Whately's theories to the unbiassed judgment of our readers. Before we conclude, however, it may not be useless to propose a few queries for the author's future consideration:

Is not the morbid secretion of gonorrhœa virulenta in some cases truly venereal, and in others *not so?* Does not such a supposition, if admitted, tend to remove a great part of the difficulty in ascertaining the nature of urethral discharges? Can the facts, which various disputants have brought forward to support their respective opinions, be explained in any other way than by admitting this supposition?

May not the operation of mercury in gonorrhœa be either as a specific remedy, or on the principle of a *common irritant*, when applied to the urethra? Does not the success attending local applications, of a very different chemical quality, seem to favour such a notion? If so, it would appear to be no proof

of

of a discharge from the urethra being syphilitic, that mercury cures the disease: at least, we may inquire, whether there be not room to demand a more satisfactory proof?

If the gonorrhœal virus be identically and at all times the same as the syphilitic poison, what account will the author give of the infectious discharge well known many centuries ago? Does he suppose the syphilitic poison to have existed in Europe before the discovery of America, and can he substantiate this opinion? Or rather, would he choose to deny that *local* venereal complaints were common before the year 1492, when Columbus made his first voyage to Hispaniola?

In discussing these points, the author will perceive it is necessary to solve other difficulties connected with the subject, which, perhaps, have never yet entered into his mind: but we must forbear to lengthen out the present article by any farther observations of our own.

Art. III. M. Fourcroy's *Systême des Connaissances chimiques.*

(Concluded from page 303.)

THE two last volumes of this work relate wholly to animal chemistry: they are highly interesting to the medical philosopher; but, as we have already given a general view of the author's arrangement, and as an English translation by Mr. Nicholson will shortly make its appearance, we shall close our account of Mr. Fourcroy's masterly performance, by laying before our readers his observations on the alterations which the blood undergoes in certain morbid affections, and his remarks on the modern attempts towards a chemical ætiology of diseases.

It is but lately that experiments have been made to ascertain the chemical changes which the blood undergoes in various morbid affections. Citizens Deyeux and Parmentier, who have entered upon this field of inquiry, have hitherto only examined the blood of patients labouring under inflammatory diseases, scurvy, and putrid fever. The principle which, in general, they have found most liable to alteration in the blood, is the albumen.

"Blood, called *inflammatory*, taken from pleuritic subjects, presented a buffy coat, a soft cruor, a coagulation that was partial, filamentous, and interrupted in the heated albumen; it was unsusceptible of coagulation in boiling water, and had the

the property of giving it a milky appearance. The buffy coat appeared to them to be formed by the fibrous matter or *fibrin*, altered, softened, and melted down to a sort of jelly, soluble in acids; accordingly, the cruor of pleuritic blood is very soft, and yields scarce any fibrin when it is washed, or dissolves almost entirely in the water. Thus we see that the characteristic distinction of inflammatory blood consists in a liquefaction of the fibrous part and of the albuminous matter, instead of the thickening and coagulation hitherto imagined; and that those principles of the blood, which, in a sound state, tend to concrescibility and separation, have, in the present morbid affection, lost those properties. I do not, however, look upon it as a thing proved, that the buffy coat proceeds from the fibrin; it appears to me more natural to consider it as occasioned by the hyperoxygenated albumen entangling a portion of the fibrin by means of its concrescible power; whereas, in a healthy state, it is the fibrin which lays hold of a portion of the albumen.

"In the blood drawn from three scorbutic patients, Mess. Deyeux and Parmentier found that there was neither more fluidity than in a sound state, nor a want of coagulation; it concreted, but the albumen was less coagulable by heat. The cruor, washed in water, yielded a quantity of fibrin in elastic filaments. The blood of one of these patients exhibited a buffy coat, only not so thick as that of the inflammatory blood, and this buffy coat became friable by desiccation; the water in which the cruor was washed afforded some membranous portions floating in it. This blood had not the usual smell; the white serum was separated from it in the ordinary way, and was not more abundant than usual. There is reason to believe, that a want of oxygenation is the principal character of the blood of scorbutic subjects; to this may be referred the violet-coloured blotches on the skin, and the plumpness which ushers in the sea-scurvy.

"Blood taken from persons seized with putrid fevers, in the early period of these disorders, sometimes exhibited a buffy coat; sometimes not: in most instances it was found difficult to separate the serum, which adhered strongly to the cruor. The beforementioned chemists either found a great resemblance between this blood and that of persons attacked with inflammatory fevers, or else they discovered nothing particular. In vain did they seek for marks of putridity, with which so many authors have asserted the blood to be affected in these disorders, and which they have assigned as the proximate cause of such

fevers. Distilled in a water-bath, this blood gave out no volatile alkali, as might have been expected; exposed to a moderate temperature, it did not run into putrefaction sooner than the blood of a healthy person. There is, therefore, no particular principle of putridity in the blood of those who labour under these fevers, though the contrary has been so often asserted. It is only in the excrementitious fluids that this tendency to septicity, and even an incipient putrefaction, take place in what are termed putrid fevers."

These are all the experiments which the above-mentioned chemists have hitherto made on this subject; "but how many important investigations of this nature," says our author, "still remain to be made! In purulent disorders, in large internal suppurations, the blood has a remarkable character; so it has in choloris, leucorrhœa, dropsy," &c. &c.

Respecting the chemical ætiology of diseases, our author, after admitting the probability of the excess of oxygen in the blood in some diseases, and the deficiency of it in others, remarks, that many modern physicians have carried this idea to an extravagant length; some having attempted to refer all diseases to two classes, viz. to an excess or deficiency of oxygenation; while others have distinguished diseases into hydrogenated, oxygenated, carbonated, azotated, according to the predominance of one or other of these four principles! "I do not think," says M. Fourcroy, "that the science of [animal] chemistry is yet sufficiently advanced to justify this mode of classification, and to serve as a basis for medical theory. The observations are neither sufficiently numerous, nor the experiments decisive enough, to allow us to assume such probabilities as established facts. I am even afraid lest, by such premature applications, the science of chemistry may suffer; a science which cannot fail to be of great utility, so long as it is applied to the healing art with that degree of caution and reserve which the healing art requires. Enthusiasm and imagination obstruct the progress of medicine, as much as the prejudice and resistance which some men oppose to those chemical discoveries, that are really capable of throwing new light upon it."

In the future editions of this work, we hope the author will take the pains to refer to the various sources from whence his materials have been drawn. This omission is unpardonable in a treatise on science. It would farther be a great accommodation to the reader, if there were a general index to the work.

Art.

ART. IV. *Annals of Philosophy, Natural History, Chemistry, Literature, Agriculture, and the mechanical and fine Arts, for the Year* 1800. By T. GARNETT, M. D. F. L. S. and other Gentlemen. Vol. I. Octavo. CADELL and DAVIES, London. Price 10*s.* 6*d.*

THIS work is intended to be continued annually, and promises to be very useful, particularly to those gentlemen who reside in the country, or abroad; as it contains in a small compass an account of every thing that has been discovered or published under the above heads; and as references are always given to the original works, this annual volume will serve as an index, pointing out the sources from whence satisfactory information on each subject may be obtained. "A volume like the present," the editor observes, "comes within the reach of almost every one, both in respect to expense and time: and if he should require fuller information on any subject, he will be directed immediately to it, without wandering in uncertainty without a guide in his researches. It is evident," he continues, "that in a work whose object is so extensive, more than a concise abstract of each particular could not be given, without increasing its size to such a degree, as would have defeated the intention with which it is published. Of those subjects however, which appeared the most important, the fullest accounts have been given, while others of less note have been more concisely noticed, except indeed, where, from the nature of the publication, it was impossible to give a concise abstract, without injury to the original; in such cases it has been deemed sufficient to give the contents and a reference."

We agree with the editor in thinking that it will be an useful work in circulating and subscription libraries, and may serve to direct the choice of books. Dr. G. informs his readers, that he has been assisted in this undertaking by several philosophical gentlemen of the first talents, whose names he perhaps may, at some future time, have the liberty of communicating to the public. We observe indeed, at the end of several of the articles, a letter which is probably intended to distinguish the contributions of different writers.

The work is divided into three parts: 1. Scientific, 2. Literary, and 3. Miscellaneous. The scientific part is subdivided into three sections; the first of which contains an account of the discoveries in natural philosophy for the year 1800; the second, an account of the discoveries in natural history; and the third, in chemistry. The first section begins with an

account of the discovery, progress, and present state of Galvanism; and in the compass of 25 pages, closely printed however, is contained an account of all that has been done since the first discovery of this curious influence, by Galvani, till the present time, including an abstract of the discoveries of the pile by Volta, and the various interesting discoveries which have been made with it, by Nicholson, Carlisle, Cruickshank, Davy, &c. This part is illustrated by a plate of Volta's apparatus engraved by Lowry.

The subject next in order is "An Account of Dr. Herschel's Experiments on Light and Heat," in which an abridgment of this celebrated philosopher's papers inserted in the Philosophical Transactions, is given, with Mr. Leslie's objections to Dr. Herschel's experiments and conclusions. The editor does not offer his own opinion on this subject; but observes, that as fact is opposed to fact, and experiment to experiment, it would be rashness to pronounce decidedly till the matter has undergone farther investigation.

These two subjects form the prominent features in the philosophical discoveries of the year 1800. They are therefore treated of at greater length than those that follow. We shall just give the heads of the remaining subjects noticed in this section of the work: Kirwan on Magnetism—Pictet on elastic Fluids—Barruel on Elasticity—Coulomb on Resistance in slow Motions—Prony's Philosophical Mechanics—the same on the Pendulum—Dr. T. Young on Sound and Light—Perolle on Sound—Herschel on penetrating into Space by Telescopes—Leslie's Hygrometer and Photometer—Wollaston on double Refraction—Hauy on the double Refraction of Sulphur—Jordan on the Inflexions of Light—the same on the solar and lunar Coronæ—Dizé on Light—Hulme on spontaneous Light—Cotte on prognosticating Weather—L. Howard on the solar and lunar Influence on the Barometer—Buck on the Barometer—Regnier on a metallic Thermometer—Chaptal on the vegetable Juices and the Circulation of Carbon—Dr. M. Young on the Precession of the Equinoxes—Laplace on the celestial Motions—Wild on the Influence of the Winds on the Barometer—Dr. M. Young on the Velocity of issuing Fluids—the same on the Number of primitive Rays of Light—Dr. Rittenhouse on Variations in the Length of Wood from Heat and Cold—Kirwan on the Declivity of Mountains—Report of the French National Institute on the new Weights and Measures—Coulomb on the Quantity of Action produced by employing Men in different Ways—the same on the Circulation

lation of Sap in Trees—Laplace on the secular Equations of the lunar Motions—Caussin on an astronomical MS. of the Arabian Ibn-Junis. The name and page of the work from which each subject is taken is subjoined. Coulomb's paper on the best Modes of employing Men, or, what may properly be termed the Philosophy of Labour, which, in the Memoirs of the National Institute, tom. ii. occupies near fifty quarto pages, appears highly important.

The second section of the first part comprehends an account of the discoveries in natural history, and is subdivided into Zoology, Botany, and Mineralogy.

The zoological part contains: An Account of the wild Boy caught near St. Sermin — Megalonyx — Platypus—Didelphis Ursina—on the Horns of Animals—on the Egyptian Ibis—on the Lanius Excubitor—new Mycteria—new Syren—Kirby on the Wheat Insect—Hardwicke on a Species of the Meloe—Pultney on the Genus Ascaris—Buchannan on Molusca—new Shells found in Pembrokeshire—Lamark on Sepia—Gioenia—Tabularia magnifica — Cuvier on Insects — Chaussier on preserving the Bodies of Animals—Daudin on the Falcon—Olivier on the Jerbœa—Lacepede on the Cobite Anableps—new Insects—Latreille on a new Ichneumon—on a new Genus of Insects.

Under Botany are comprehended an account of a new Conferva—of the Orcheston long Grass—Tremella Nostoc—elastic Gum—stimulant Effects of Camphor—Vauquelin on the Malate of Lime—Van Mons on Rhus radicans—Monocotyledons—Vauquelin of the Sap of Vegetables—Dr. Smith's Flora Britannica—two Species of Tricomanes—a new Species of Cryptogamia—Vantenat on the Genus Phallis—new Plants by Buchannan—new Species of Nymphea—new Plants by Vantenat—on the Epigœa repens—Raymond on Bartsia — new Plants by Roxburgh.

Under the mineralogical department we have an account of human Bones found in a Cavern in the Mendip Hills—Obsidian of Heckla—a new Earth—Basaltes in America—Fossil Wood—colouring Matter in Lapis Lazuli—fossilized Exuviæ of Animals — Electricity of the Zeolite — Vauquelin's Analysis of Minerals—Discoveries of C. Sage—Native Iron in Peru—Peruvian Pyrites—Proust on Copper Ores—La Pérouse on petrified Bones—Analysis of the Thunder-stone—Hauy on the Crystallization of Minerals—Lepidolite—Lakes of Natron—Raymond on the red Colour on Snow—Analysis of the Mud of the Nile — Godolinite — Konigstein — carbonic Blende—

Uranium—metalliform Oxydes of Iron—Analysis of a Mineral found in Norway—Semoline.

The third section contains an account of the Discoveries in Chemistry, viz. those of Mr. Davy on nitrous Oxyde, of whose "Researches" a copious abstract is given; particularly of that part which details the effects of nitrous oxyde on different individuals who respired it—Hatchett on Zoophytes and the component Parts of Membrane—Howard on a new fulminating Mercury—Fourcroy and Vauquelin on the vegetable Acids—Henry's Experiments on the muriatic Acid—Berthollet on the Composition of the muriatic Acid—Discoveries of Mr. Proust—Berthollet on Eudiometry—Leslie on the absorbent Powers of different Earths—Berthollet on the Laws of chemical Affinity—miscellaneous Observations and Discoveries—Vauquelin on the Combination of Metals with Sulphur—Badollier on a new Method of preparing acetic Acid—Gazeran on the constituent Parts of Steel—Henry on a new Method of preparing Prussiate of Potash.

The first part is concluded by a supplement, which contains an account of some discoveries and works which were published after the preceding was printed. Among these are, Lalande's History of Astronomy for the year 1800—Herschel on Heat and Light, from the third part of the Philosophical Transactions — Mudge's Trigonometrical Survey, from the same. This part is concluded with a synoptical view of the French new Weights and Measures.

The literary part is divided into four sections: 1. containing an account of English Literature—2. French—3. German—4. Spanish, Italian, &c. This part, which, the editor informs us, was drawn up by Mr. Price, of the Westminster Library, forms a catalogue raisonné of all the books that have been published during the year 1800, arranged under their distinct heads of sciences, &c. alphabetically. The booksellers' names, and price where it could be ascertained, are added; and, when it could be done with sufficient brevity, a character of the book is subjoined. This part occupies a considerable portion of the volume, and, though it merely shews the industry of the compiler, will not be without its use.

The last part, the Miscellaneous, is likewise divided into four sections; the first containing an account of the Improvements in Agriculture—the second in the mechanic Arts—the third in the fine Arts—and the fourth an Obituary, or Account of the Deaths of literary Characters. Among the agricultural discoveries is Millington's Method of preserving Potatoes—

Fenwick

Fenwick on the Importance of elastic Fluids in Vegetation—on the Blight of Wheat—on destroying Vermin on the growing Crop—Sir Joseph Banks on the Effect of the Equisetum Palustris on Drains—Lord Sommerville on the Breed of Sheep—Premiums proposed by the Board of Agriculture.

Under the mechanic and useful Arts are noticed Collins's Description of a Fire Escape—Lampedius on the Beet-root Sugar—Report of the French National Institute on the Beet-root Sugar—Cumming on the Effects which Carriage Wheels, with Rims of different Shapes, have upon the Roads—Cadat de Vaux on a Method of restoring the Utility of Wells, and procuring Water in almost every Situation—Chaptal on a new Method of bleaching Cotton—Clouet on the Composition of Enamel.

Such are the contents of the first volume of this annual register of philosophy. The different papers seem to have been abridged with judgment; and it must be evident, that a work of this kind, properly conducted, cannot fail of being highly useful.

ART. V. *Instructions relative to Self-preservation during the Prevalence of contagious Diseases.* By a PHYSICIAN. Octavo. 14 pages. SEELEY and CALLOW, London. 1801. Price 6*d*.

THIS small popular tract contains some plain directions, which, if carefully followed by those to whom they are addressed, will, we have no doubt, contribute to restrain within bounds and lessen the ravages of contagious fevers. The author observes, that "while this pamphlet was printing, a new performance has appeared, from the pen of Dr. Haygarth, entitled, 'A Letter to Dr. Percival, on the Prevention of infectious Fevers, read to the Literary and Philosophical Society of Bath:' but as this treatise, which exhibits so fine a specimen of patient research and just reasoning, will, it is probable, be read only by those who belong to the medical profession; it will not supersede the necessity of a set of instructions designed, like the present, for the use of the community at large."

In this little tract, the author first points out what is meant by a contagious fever, and then proceeds to state what precautions should be observed when it occurs in a family, by the nurses and attendants, by the relatives, and by visitors: he next makes a few judicious observations on the proper regimen

regimen and diet to be used, during the prevalence of contagious diseases, and recommends an adherence to that sort of food and drink, as well as those hours of taking them, which have been customary; and in cases of fatigue, to support the spirits and strength by moderate quantities of wine. He does not, with Dr. Rush, recommend a vegetable diet and water; for though this may perhaps be useful in the climate of Philadelphia, and the West Indies, yet he is persuaded it will not agree with the majority of British constitutions, or even with foreigners resident in Britain. On the other hand, a very full and luxurious diet would be equally improper. A moderate quantity of animal food, (not omitting vegetables,) joined with a moderate portion of well-fermented liquor, and a few glasses of red port to those who are accustomed to the use of wine, will in most cases be advisable. If the weather should be warm, the proportion of butcher's meat should be diminished, and that of vegetables increased. At such seasons, pickles, and ripe (but somewhat acid) fruits, are highly salutary. Daily exercise should not be neglected.

The author next proceeds to consider certain reputed preventives, particularly camphor and tobacco, on neither of which he advises so much reliance to be pleased, as to cause a neglect of other precautions. We are rather surprised to find that he does not mention the use of the cold, or shower bath, wherever a person who has been exposed feels an attack of fever, as we have seen numerous instances where the febrile action has been instantly cut short by this means. He does indeed hint at the use of the shower bath as acting as a preventive by invigorating the system; but though it may be highly proper to be used as he directs, we would particularly recommend it on the commencement of the febrile attack. To conclude, though this pamphlet contains nothing new, yet it is written in a plain and familiar manner, adapted to the use of the better class of housekeepers, for whom it was composed, and to whom we cannot do better than recommend it.

ART. VI. BURNS's *Dissertations on Inflammation.* VOL. II. *containing, Dissertation II.—On the Cure of simple Inflammation; Dissertation III.—On the phagedenic and some other Species of Inflammation; Dissertation IV.—On the spongoid Inflammation; Dissertation V.—On the scrofulous Inflammation; Dissertation VI.—On the cancerous Inflammation.*

(Concluded from page 283.)

THE contents of this second volume are sufficiently pointed out in the title-page. Passing over the Second Dissertation, on the Cure of simple Inflammation, we shall proceed to the consideration of the remaining four Dissertations, wherein the author endeavours to establish as many different species of inflammation, viz. 1. the phagedenic, 2. the spongoid, 3. the scrofulous, and, 4. the cancerous.

"When any peculiar modification," says the author, "of the inflammatory action takes place, specific inflammation is said to be produced; that is to say, the action possesses some peculiar or specific qualities, independent of the simple condition of inflammation; and these are generally productive of evident and visible effects, which are characteristic of their presence; but, until these effects, which are chiefly observable in the appearance of the consequent ulceration, appear, it is frequently impossible, from the symptoms of the inflammation alone, to say that it is specific; because the evident effects, or symptoms of the inflammatory action, such as heat, pain, redness, &c. admit of few specific alterations, varying only in degree, and this variation taking place often without any specific affection of the action."

What are we to understand from all this? Why, that there is no such thing as specific *inflammation*; though there is such a thing as specific *ulceration*. There is the scrofulous ulcer and the cancerous ulcer; but the inflammation which precedes the ulceration, in both these affections, is common inflammation. To us it appears, that Mr. Burns has very improperly transferred the distinctive names of tumours and ulcers to inflammatory action. What can be more unapposite than the term phagedenic inflammation? Such a thing as a corroding ulcer there certainly is, but a corroding inflammation we never heard of before. It is not the inflammation that characterizes scrofulous and cancerous affections; it is the seat and nature of the tumour first, and of the ulceration afterwards. We need not then puzzle ourselves about slight variations in the appearances

pearances of the inflammatory action to which these tumours are liable; no certain discrimination can be drawn from them. That there are various species of tumours and ulcers, (such as the phagedenic, the scrofulous, the cancerous, &c.) will not be denied; but that there are as many species of inflammation we can by no means admit.

As the opinion which is maintained by Dr. Adams on the nature of cancer has lately attracted notice, we shall here subjoin Mr. Burns's remarks on that subject: "Strange as this doctrine of living creatures producing cancer may appear, it is nevertheless adopted by a late very ingenious writer. When hydatids find their way into 'a solid substance,' the consequence, in his opinion, will be cancer; and the success of an operation will, he conjectures, depend, in a great measure, upon these animals being confined in a common cyst, for then they may be all removed; whereas, if they be unconnected, some of the smaller ones may be allowed to remain. From the surface of the cyst, which contains the animal, a fungus shoots out, and thus acts as a barrier between it and the skin; or, if the animal have been in the stomach, it separates it from the coats of that viscus, 'preventing suppuration in the one instance, and absorption in the other.' This suppuration, 'and disposition to fungate before the skin 'is broken,' if I understand him, is produced by the death of the animal; for says he, 'if hydatids possess the principle of vitality during their transparent state, and their opacity 'is the effect of the loss of that principle, would they not, 'in the latter stage, stimulate the part in which they are situated to suppuration, as we find the case with the Guinea 'worm when dead?' Concerning the manner in which these animals produce the symptoms of cancer, we are told, that 'this enlargement of a foreign body, in a solid substance, 'and so extremely sensible as the breast, cannot but be attended with intense pain, and frequent inflammation.' A doctrine not far removed from that taught in the humoural schools, which maintained, that the coagulation and inspissation of the fluids distended the follicles of the glands, producing many cavities, and much pain.

"That hydatids may be formed on a cancerous gland, I shall not dispute; but that they are generally to be met with, or are in any respect essential to the disease, I cannot admit. In all the cancerous breasts, testicles, and tumours, which I have examined, I never saw any thing which could be considered distinctly as a hydatid; so that I suspect, that under this

name have been described the small cancerous abscesses, with thick cartilaginous sides, which we so universally meet with in schirro-cancerous glands. We likewise find cancer take place in circumstances in which no hydatids can be found. Thus, for instance, a cancerous wart being knocked off the face, a cancerous ulcer is produced; but no hydatid is to be found at the base of the wart to produce this."

We are not complete converts to the doctrine of cancerous hydatids; although we have certainly met with them; but we think the author's answer to Dr. Adams is unsatisfactory.

We shall close our account of this work with the author's observations on what he terms the "spongoid inflammation" (spongoid tumour;) a species of tumour which, he says, "has either not been described at all by any author, or has, when it was noticed, been considered as of a cancerous nature. It is, perhaps," he adds, "one of the most alarming diseases to which we are subject; because, as yet, we know of no specific remedy; and an operation can only be useful at a time when it is very difficult to persuade the patient to submit to it.

"I have named it the spongoid inflammation, from that spongy elastic feel which peculiarly characterizes the disease, and which continues even after ulceration takes place.

"This disease begins with a small colourless tumour, which, if there be no thick covering over it, such as the fascia of a muscle, or the aponeurosis of the foot, is soft and elastic, but tense if otherwise. It is at first free from uneasiness; but, by degrees, a sharp acute pain darts occasionally through it, more and more frequently, until the sensation becomes continued. For a considerable time, the tumour is smooth and even, but afterwards it projects irregularly in one or more points; and the skin at this place becomes of a livid red colour, and feels thinner. It here readily yields to pressure, but instantly bounds up again. Small openings now form in these projections, through which is discharged a thin bloody matter. Almost immediately after these tumours burst, a small fungus protrudes, like a papilla; and this rapidly increases, both in breadth and height, and has exactly the appearance of a carcinomatous fungus, and frequently bleeds profusely. The matter is thin, and exceedingly fetid, and the pain becomes of the smarting kind. The integuments, for a little around these ulcers, are red, and tender. After ulceration takes place, the neighbouring glands swell, and assume exactly the spongy qualities of the primary tumour. If the patient still

still survive the disease in its present advanced progress, similar tumours form in other parts of the body, and the patient dies hectic.

"On examining the affected parts after death or amputation, the tumour itself is found to consist of a soft substance, somewhat like the brain, of a grayish colour, and greasy appearance, with thin membranous-looking divisions running through it, and cells, or abscesses, in different places, containing a thin bloody matter, occasionally in very considerable quantity. There does not seem uniformly to be any entire cyst surrounding the tumour, for it very frequently dives down betwixt the muscles, or down to the bone, to which it often appears to adhere. The neighbouring muscles are of a pale colour, and lose their fibrous appearance, becoming more like liver than muscle. The bones are uniformly carious, when in the vicinity of these tumours. If large, they are found rough, and broken off into fragments; if small, they are generally soft and porous. This tumour is sometimes caused by external violence; but often it appears without any evident cause.

"I know of no remedy which has a power of checking the progress of the complaint, or removing it. Friction, with anodyne balsams, sometimes gives relief in the early stages; but it does not seem to retard the progress of the disease. Extirpation is the only remedy which has a prospect of being successful; but it is only advisable in the early stages, whilst the disease is entirely local, and has not extended to the neighbouring glands; for, after they become affected, the chance of recovery is greatly diminished. It is, however, sometimes difficult to persuade patients at this time to submit to amputation, or extirpation, because the pain and inconveniences are considerable; but the operation ought to be urged with all the eagerness which a conviction of its absolute necessity, and its precarious issue, if delayed, will inspire."

As Mr. Burns intends to publish a third volume on the venereal inflammation, we would recommend him to aim at more compression of thought and words, and to guard against a few grammatical inaccuracies, as well as several expressions peculiar to his own country. He would do well likewise to keep his manuscript by him for some time, and revise it frequently, as well as to consult some experienced professional friend; for, though many things in the volumes before us deserve the praise of ingenuity, yet we have frequently discovered a deficiency of practical experience, and too great a disposition to theorize.

Art. VII. *Dr.* Haygarth's *Letter on infectious Fevers.*

(Concluded from page 312.)

In our last number we endeavoured to make our readers acquainted with the most important facts which have been ascertained by Dr. Haygarth on the subject of contagion; we gave an account of the principles relating to it, which his long experience and accurate observation had enabled him to establish, and of some of the inferences deduced from those principles: we have now to notice the sixth and last of his practical conclusions, which is, that "infectious fevers may be prevented in the army and navy." Dr. Haygarth had reason to believe, from the information of an army physician, that fevers are often generated in a camp by the foul air which results from a number of soldiers sleeping in a small bell-tent not susceptible of ventilation: he therefore recommended, as a means of preventing this evil, that grooves should be formed in the centre pole of the tent, so as to permit the escape of the foul air without admitting rain. A similar contrivance had occurred to Mr. Pelham, and had been adopted, on his suggestion, by the Sussex and West York militia, at Warley camp, in 1796, with great success. "Three holes were cut in the upper part of the tent, and a triangular piece of canvass was placed over them, and sewn on two sides, so as to let the foul air escape from the cavity left by the third side not being sewn down.

"These regulations, to prevent the generation of fevers, will require to be executed with much greater exactness, to prevent their propagation. Hospital tents ought to be spacious and numerous: they should be constructed in such a manner as to admit free ventilation. By plentiful dilution with fresh air, and rigid attention to cleanliness, it appears very manifest that soldiers, in a healthy situation, might be effectually preserved from infectious fevers, dysentery, &c.; the whole army, with a few accidental exceptions, would be constantly fit for duty. Every camp ought to be plentifully supplied with such accommodations, which are most essentially important not only to their safety but their military force. Thousands of men and millions of money might be saved by a sufficient supply and judicious employment of cords and canvass, which are neither expensive nor cumbersome provisions for an army. The tent poles any country will supply.

"The jails in which deserters from the army are confined, for obvious causes, are peculiarly exposed to infectious fevers.

The military prisoners, who pass in great numbers to and from Ireland, are lodged in the castle at Chester, and have, for a long series of years, to my knowledge, been frequently afflicted with this fever. In 1772 I attended an apothecary who caught this infection, and died of it. In the year 1793 there were 17 out of 18 deserters in this prison ill of this fever at the same time. The county magistrates, affected with the melancholy situation of these prisoners, and alarmed at the danger of their communicating the contagion to the inhabitants of the city, desired the physicians of Chester to give their advice and assistance in what manner the mischief might be prevented. We addressed a memorial to Government, recommending the adoption of regulations similar to what had been long practised at our infirmary. These measures were approved, and executed with complete success; and there is reason to hope that they will be widely extended for the general benefit of the British army; for, in a few months after our correspondence with the Right Hon. Mr. Windham, secretary at war, a medical inspector, sent from the War-office to visit all the military jails and hospitals, brought to us again our own rules, enjoining a strict observance of them, which I had the satisfaction to learn was the order of Government.

"If we take into consideration how long infection remains in the body in a latent state, that in this period of time deserters are sometimes removed to their regiments or ships at a great distance, we shall clearly understand in what manner infectious fevers may be introduced into our army and navy."

A numerous body of deserters from the army having been permitted to enter into the navy, Dr. Haygarth advised that a proper time should be allowed for the performance of quarantine in a clean jail. "During this period some of the deserters fell ill of the fever, from the infection which they had previously received. This caution deserves general attention, particularly in the navy. Sailors taken out of an infectious jail should never be mixed with the crew of a ship, till a sufficient time had elapsed to discover whether any latent poison had infected them. Such considerations are of great national importance." We cordially assent to the truth of this remark, and recommend it to the most serious consideration of all who have opportunities to render it of practical utility.

"The whole doctrine of febrile contagion, explained in this letter, is in every respect applicable to the preservation of sailors and soldiers on board ships of war, and even transports;" and excellent regulations are already established in the navy,

navy, as to cleanliness, ventilation, and the removal of patients ill of infectious fevers into the sick birth or an hospital-ship. One remark, however, is important, and worthy of attention. From the facts stated by Dr. Haygarth, it is plain that the confinement of patients in the pestilential atmosphere of a sick birth is altogether unnecessary, and that they may, if dressed in clean clothes, be brought on deck without danger of infecting the healthy part of the crew. This practice would not only be of signal advantage to the patients, but would afford an opportunity of cleansing the sick births, and of purifying, by exposure to air, the infected clothes and bedding.

We conclude our account of this part of the work by an extract which will be peculiarly gratifying to many of our readers.

"Among other causes of the wonderful achievements of the British fleets, it is not the least, that the sailors, during the whole war, have enjoyed a high degree of health. You will agree with me, that this happy circumstance is chiefly to be ascribed to the wisdom of medical regulations and improvements; and you will not be displeased that I thus claim some, and no inconsiderable, share of honour to our profession from the late glorious victories of the British navy."

In his address to the College of Physicians at Philadelphia, Dr. Haygarth expresses the most decided conviction that the yellow fever, or, as he terms it, the American pestilence, was introduced from the West Indies. This opinion was formed from the clear, consistent, and complete evidence adduced by the College, in the Facts and Observations upon the subject, which they published; and it remains unaltered, after deliberately considering all that has been advanced in the subsequent publications relating to it: he therefore laments, that the opposers of this doctrine (who, he thinks, have alleged causes and arguments entirely groundless) have excited doubts in the minds of extra-professional men, even of enlightened understandings, so that the legislative and executive governments have been unable to act with firmness, decision, and effect. Under this impression he proceeds "to review the opinions which have produced these most pernicious effects, by discouraging every judicious measure for the prevention of this pestilence;" and first, that advanced by a physician of eminent abilities, who, in an evil hour, ascribed the fever to putrid coffee, "without any proof, or the slightest degree of probability."

This doctrine is controverted by Dr. Haygarth with much zeal and acuteness; but, although we perfectly agree with him

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in thinking it to be erroneous, we are not quite satisfied of the propriety of applying to it the contemptuous epithets which he uses.

The extraordinary publication of Mr. Webster, on epidemical and pestilential diseases, is next noticed by Dr. Haygarth. Mr. W. "ascribes plagues, pestilence, small-pox, scarlet fever, influenza, &c. in one quarter of the globe, to earthquakes, storms, &c. &c. in another, and at a different time, allowing an interval of months or years:" and "for the cause of the pestilence which so sorely afflicted America in 1793, he goes back as far as 1788, to collect an account of all the earthquakes (in Iceland and in Tuscany,) comets, tornados, high tides, hail-stones, meteors, sickly fish on the banks of Newfoundland, a halo, a famine in India and China, dead haddocks on the coast of Norway, &c. &c." Our readers, we suppose, have had enough of Mr. Webster.

This address to the College of Physicians is subjoined to the letter to Dr. Percival, because Dr. Haygarth has the fullest confidence that the measures which it recommends, from his own experience at Chester, would effectually suppress the pestilence of America. He is convinced, from the analogy of small-pox and typhus, that the positions of the College and Academy, respecting the American fever, are incorrect; the former asserting, "that the infection may be caught through the medium of air, at the distance of one hundred or three hundred yards from the pestilential poison;" the latter alleging, "that it may be caught at the distance of a mile or a mile and a half!"—"But when positive and direct proofs can be obtained, physicians should never reason by analogy." Dr. Haygarth therefore offers to the consideration of the College the following inquiries; and he requests that they will appoint a committee to procure full and explicit answers to them, which he thinks will contain a body of evidence of great importance to America and to mankind.

"1st. 'What proportion of persons fully exposed to the 'pestilence are infected?' Cases to determine this question ought to be circumstantially related. 'Do mothers, wives, 'nurses, sisters, or daughters, who have most intimately at-'tended their relations, sometimes, and how often, escape 'infection?'

"2d. 'To what distance from the poison is air rendered 'infectious?' Upon this point will obviously depend the practicability of preventing and exterminating the distemper. Collect all the well-authenticated facts in your power, where

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one or a few in a family were attacked, and the remainder preserved. 'What numbers walk through the streets where infection exists, but remain unaffected by it? How many persons in the houses adjoining, or opposite to those which contain the pestilence, escape infection?' To remove all doubts, let it be noted, from some meteorological register, in what direction the wind has blown during the epidemic. Let names and dates be accurately stated. A minute detail of circumstances affords most satisfactory conclusions.

"3d. 'How long does the poison remain latent in the body? that is, what period elapses between exposure to contagion and the commencement of the fever?' On the determination of this point the rules of quarantine ought to be formed.

"4th. 'Can it be ascertained at what time and in what manner the poison was brought to Philadelphia, New York, &c. and the small towns in the neighbourhood of these cities?' This intelligence would be of the greatest advantage to prevent future calamities, but which will be very difficult to obtain, as the authors of such dreadful mischief will be sedulous to conceal the transactions which have produced it."

We have no doubt that the College of Philadelphia will receive these inquiries with all the attention which is due to the high reputation of their author, and is demanded by the importance of the subject to which they relate; and we cordially hope that the adoption of Dr. Haygarth's plan will be as effectual in diminishing the extent and fatality of the pestilence of America, as it has already been successful in limiting the devastations of typhus, wherever it has been carried into effect on this side of the Atlantic.

We conclude our account of this excellent publication with the following extract: we have reserved it for this place, that we might not, by any subsequent observations, weaken the impression which it is so well calculated to leave on the mind of the reader. We have only to express our hopes that the benevolent author will long be enabled, by the enjoyment of his well-earned tranquillity, to persevere in the course which he has hitherto pursued with such distinguished reputation to himself, and advantage to science and to mankind.

"In this probationary state of existence, for good but inscrutable purposes, there is, in all human affairs, an admixture of pain and pleasure, fear and hope, disappointment and enjoyment. On looking at the world around me, I have reason, much reason, to be gratefully thankful to the wise Disposer

poser of all things, that hitherto my lot has been comparatively fortunate, prosperous, and happy, with a mind well disposed to relish such felicity. But to one who has passed through such a busy and varied scene of life; who has had such an intimate intercourse, and for so long a period of time, with the different ranks of society, some painful anxieties have undoubtedly been my portion. Upon these and many other occasions, the contemplation of plans for the prevention of distempers, and others for the improvement of the children of the poor in habits of industry, morality, and religion, has ever had the happiest influence in restoring a placid serenity of mind, and in administering heartfelt consolation in scenes of the deepest melancholy. What sublunary object can be esteemed of higher value?"

ART. VIII. *Friedrich August Walter, Doctor d. Wiend arzneikunst, &c. Einige Krankheiten der Nieren und Harnblase untersuch und durch Leichen-Oeffnungen bestactigt. Mit 13 Kuppertafeln.* i. e. *Some Diseases of the Kidnies and Bladder investigated and illustrated by Dissections.* By F. A. WALTER, &c. Doctor in Surgery and Physic. With 13 Plates. Quarto. 46 Pages. Berlin. 1800.

THE observations contained in the present work were published some years ago in the Memoirs of the Berlin Academy of Sciences, in the French language. They are now republished, in the German tongue, with corrections, and with the addition of two new plates.

The first sixteen pages relate to certain diseases of the kidnies, such as stone in the kidnies, gangrene of the kidnies, dropsy of the kidnies, &c. In the kidney of a man who died at the age of sixty years, after the most excruciating torture, a stone was found that weighed 3 oz. 4 drs. and 2 scruples. The particulars of this case are related in the first part of the description of Walter's (the father's) Anatomical Museum, published at Berlin in 1796.—The following is a remarkable case of gangrene in the kidnies: A girl, after having suffered for some weeks great pain in the kidnies, accompanied with little or no urine, and a discharge of pus mixed with blood and small gravel, had a swelling of the abdomen which resembled pregnancy, and was suspected to proceed from that cause by the medical attendants. Continuing to go about her work, she on a sudden dropped down dead. On opening the body,

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it was found that the enlarged kidnies had pressed back the whole colon, protruding themselves above and underneath this intestine, so as to expand the abdomen in the before-mentioned manner. The right kidney was of a dull red colour, unusually large, and quite putrid. The inside was entirely corroded, and the cavity filled with grumous blood, pus, and dissolved renal substance. Two stones were found enveloped in this substance, which resembled pap.—That affection of the kidnies, which has been denominated by Ruysch *expansio renum* and *hernia renalis*, out author terms dropsy of the kidnies. The original cause of this disease, he observes, is either in the kidnies themselves and ureters, or in some of the neighbouring parts. Among the possible causes of *hydrops renalis* may be mentioned a stone impacted in the ureter and blocking up the passage; obstructions and indurations in the circumjacent parts, causing them to press upon the ureters, and thereby prevent the discharge of urine; such as a scirrhus of the duodenum, of the pancreas, of some of the lymphatic glands in the abdomen seated near the ureters, of the uterus and ovaria; or a dropsical tumour of the uterus, ovaria, and Fallopian tubes. Moreover, the sides of the ureters may adhere together, and their cavities be obliterated, by means of an exudation of coagulable lymph, the consequence of inflammation. From the structure and situation of the female organs of generation (so liable to be affected by scirrhus and dropsy, and in that state to press against the ureters,) it happens that women are more liable to renal dropsy than men. In this disease the kidnies are so completely changed, that scarcely any thing of them remains but their external coat or membrane, enlarged and distended like a bladder. As soon as the ureter is compressed, or its passage is obstructed either by a stone or by inflammation, so that the urine cannot pass into the bladder, it will accumulate, not only in the ureter, but also in the kidnies: hence they will be greatly distended, and all their functions will be gradually impeded and destroyed.

Stones in the bladder, says our author, may originate from three sources: 1st, from calculi descending from the kidnies; 2dly, from extraneous bodies getting into the bladder; and 3dly, from the bladder itself. The first is a very common origin. Of the second two remarkable cases are related, wherein portions of solid extraneous bodies served as nuclei for the calculus vesicæ. In the bladder itself Mr. Walter states that a stone may be formed; 1st, from the mucus which is secreted from its inner surface; 2dly, from extravasated blood; and

3dly, from a polypus, which, it seems, may be produced in the bladder as well as in other cavities. A most extraordinary instance of this last affection is related by the author. The bladder of a woman, aged 45, who died suddenly, was found entirely filled up and distended with a fleshy, fibrous, soft substance, which extended even into the urethra. Being subjected to chemical analysis, this singular gelatinous substance yielded volatile alkali, calcareous earth, some oil, and common salt. This polypus was attached firmly to the middle part of the bladder; and Mr. Walter has no doubt, if he had injected the blood-vessels of the bladder, that he should have traced some of those vessels into the before-mentioned substance. Nothing more respecting the history of this patient was known, except that there was a constant discharge of mucus from the urethra for a long time previous to her death.—The disease described by Ruysch, under the name of *scabies vesicæ interna*, our author considers to be nothing more than the beginning of an erosion of the bladder, in consequence of inflammation.—Some observations follow on the hernia vesicalis and prolapsus vesicæ, two diseases which, our author says, must not be confounded; and the work concludes with several curious remarks relative to the hernia urachi. It is commonly supposed that the urachus is gradually closed, and its cavity obliterated, after birth; but Mr. Walter's father has proved, by numerous dissections, that it remains open throughout life. Vide J. G. Walter Observationes Anatomicæ. Berlini. 1775.

ART. IX. *Actes de la Société de Médecine, Chirurgie, et Pharmacie, établie à Bruxelles sous la Devise Ægrotantibus.* Tome Premier. Deuxième Partie. Ornée de Planches en taille-douce. Octavo. 110 pages. A Bruxelles, chez FLON. An viii. (1800.) Prix trois Francs.

THE former part of the Transactions of the Medical Society at Brussels was noticed by us, at considerable length, in the second volume of the London Medical Review. We have much pleasure in observing with what zeal and success the members of that respectable body are still prosecuting their labours. The Society of Medicine at Brussels took its rise amid the din of war and tumult, when the art of healing had been depressed, its friends banished, empiricism triumphant, and the public schools annihilated. The laudable efforts of the

patrons

patrons to this institution gave birth to other similar societies in different provinces of the French republic; so that "Vandalism ceased to spread its ravages," and Paris, Lyons, Bordeaux, Nancy, &c. followed the example of Brussels.

The present publication, we are informed in the preface, would have made its appearance much sooner, had not the Society been deprived of three of its most valuable members, Vanasbroeck, Dumont, and Vanderstegen de Putte. The materials for a third volume are, however, preparing by Citizens Rozin and De Roover. The first pages of this work are occupied by an alphabetical list of the resident members of the Brussels Society; which is followed by a list of the new foreign associates, and an enumeration of the papers and books received since the former volume was published. The memoir that first presents itself contains

Reflections on the vacillating Cataract. By J. Forlenze, Surgeon-oculist at the Hôtel-Dieu, &c.

This disorder *(cataracte branlante,)* the author remarks, although it has been noticed by Celsus, and some other of the ancients, is neglected by the moderns, St. Ives alone having treated upon it, and that very slightly.

M. Forlenze gives a case of complete blindness in an elderly person from a gutta serena. The left eye exhibited, on examination, a very peculiar structure, the crystalline lens appearing to range in different directions, with a tremulous motion, according to the positions of the eye itself. This phenomenon had been attributed by St. Ives to an adherence of the iris to the capsule of the crystalline humour; and of the truth of that opinion our author seemed fully convinced in the present case: he therefore resolved to attempt effecting a separation of these two adhering parts, with the view of clearing up the nature of the disease, rather than with the hope of a cure.

The patient being placed in the ordinary position, leaning his head on the bosom of an assistant, who with his two fore-fingers raised up the superior eyelid, Mr. F. kept down the lower lid with his left fore-finger; and, at a moment when the patient was directing his eye outwardly, he plunged the scalpel obliquely, from above downwards and from without inwards, at the distance of a half line from the sclerotica. The incision being then carried forwards to the opposite angle of the eye, at the same distance from the sclerotic coat, a semilunar section was made through the inferior part of the cornea. At the same instant the operator likewise rested the extremity of his fore-finger upon the globe of the eye, to prevent its yielding,

and to afford a point of support against his nail in the act of completing the incision downwards.

For the purpose of extracting the crystalline, Mr. F. employed a golden needle, mounted like the cataract-knife, nineteen lines in length, with cutting edges, flattened in the form of a lancet, and one line in breadth. This instrument, as well as the knife, was held in the manner of a writing-pen; and, being conducted under the flap of the cornea, he passed it into the posterior chamber of the eye, moving it in various directions, so as to destroy all the adhesions between the capsule of the crystalline and the iris. These adhesions, he says, were more firm at the inner and upper parts than below. The lens immediately escaped, with its capsule, without applying the smallest degree of pressure. The pupil remained perfect, and there appeared no derangement or dissolution of the vitreous humour, as Maître Jean pretends will happen in this case.

The slightest compresses and bandages were used. No accident happened till the sixth day, when a trifling ophthalmia supervened: but the event was quite as successful as could have been reasonably expected. The author offers the following reflections:

1. This case confirms the opinion of St. Ives, who thought it was occasioned by an adhesion of the iris with the capsule of the crystalline.

2. It proves that this adherence may be favoured by the immobility of the iris, arising from a palsy of its nerves; whence it follows, that a gutta serena is one of the causes of a vacillating cataract.

3. It appears from the foregoing case, that, in similar circumstances, relief ought to be attempted; and that it is possible, in destroying the adhesions, to obtain a degree of success which surgeons have not hitherto deemed practicable.

The instruments commonly used for opening the crystalline capsule will, in the above case, prove but a feeble resource for isolating the iris. The needle substituted by M. Forlenze, for the apparatus of Wenzel and of La Faye, is much more simple and convenient.

Case of a complicated Cataract. By the Same.

M. Carbonel, lieutenant-general of the artillery, in the 67th year of his age, had a disease of the left eye with the following complications:

1. A capsular cataract;
2. An adherence to the posterior part of the iris;
3. A liquidity of the crystalline.

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The author made a section through the cornea, as in the former case, and extracted the crystalline; but there was so firm an adhesion between the capsule and the posterior part of the iris, that syringing was not effectual, and it was necessary to dissect it off with his needle, assisted by the forceps. He then perceived an opacity and thickening of the hinder part of the capsule adjoining the membrane of the vitreous humour; which caused extreme difficulty in extracting the whole, and obliged him to cut the remaining portion of it into three pieces with a small pair of scissars. In performing this operation, above half of the vitreous humour escaped, and M. Chopart, who assisted him, thought there could be no hope of success: but the author, having been taught by past experience that the vitreous humour might be regenerated, gave a favourable prognosis. The patient got well, although an ophthalmia supervened, and at length he recovered his sight.

Case of a Cataract, having its Centre opaque and solid, but its Circumference liquid and transparent. By the Same.

After making a similunar section of the cornea, and an incision into the capsule, the liquid part of the crystalline lens escaped; but the central portion, being firm, adhered to the posterior part of the capsule. The adhesion was destroyed by a *curette*; the remaining portion of the lens was then extracted, and a few drops of very clean warm water were injected by means of a curious syringe invented by the author. Some stress is here laid on the use of this syringe and lukewarm water, for the complete extraction of the accompaniments. The author disapproves of M. Anel's syringe, as being too capacious: his own is graduated, and will hold only twelve grains of water.

New Observations on the Infusion of the Lauro-cerasus. By M. Wurzer, Professor of the University of Bonn, &c.

There are many articles in the materia medica that are suffered to become obsolete, or entirely disused in practice, for want of making sufficient trials of their powers. Since the water of the lauro-cerasus has been detected to be poisonous, it has been discarded from our pharmacopœias; but we know that by the judicious and cautious administration of poisonous drugs the most salutary effects are produced in diseases not curable by any other means. From considerations of this kind the author was induced to institute a set of experiments with this medicine, first on animals, afterwards on man. But finding the water was prepared of different degrees of strength by different apothecaries, he distilled that with which he made his experiments

experiments from the following formula :—One pound of fresh laurel-leaves, cut in pieces, was distilled with four pints of water, and one pint of the water drawn off. This preparation, given in small doses, was found, he says, to be powerfully sedative, diminishing the action of the heart and arteries, and exciting those of the absorbents. The author tried it on four patients affected with hypochondryism, or extremely morbid sensibility of the nerves, and in all of them with complete success. The dose of the water was fifty drops three times a day. It does not appear that the medicine produced evacuation, either by urine or perspiration. From its power of diminishing the action of the heart and arteries, and increasing that of the absorbents, we expected he would have tried it in hæmorrhages and dropsies, instead of the digitalis, which certainly does not answer the high expectations that had been conceived of it.

Van Mons recommends that the laurel-leaves be gathered while the sun is shining upon them, that they be bruised in a marble mortar, and a tenth part of brandy added to the water in which they are distilled. He also says, that in the commencement of the distillation the fire should be made to burn briskly; otherwise the oil, which has very little volatility, will not be brought over.

Observations on a particular Cause of Convulsions, which happen to pregnant or lying-in Women. By W. Demanet, Surgeon, &c.

The author having met with some cases of dropsical women who were affected with convulsions during parturition, attributed them to the accumulation of water in the habit; but certainly, as the editor observes, with little reason; convulsions frequently occurring in women who have no disposition to dropsy.

Supplementary Remarks on the above Paper. By M. Fournier.

This gentleman shews, from reasoning and from the authority of the best writers on the subject, that puerperal convulsions are not occasioned by dropsical affections. He relates the case of a patient he attended, whom he delivered with the forceps; the convulsions ceased almost immediately on the child's being born.

A Letter and Case presented to the Society. By C. Noëll, chief Surgeon of the military and civil Hospitals of Rheims, &c.

This letter is merely introductory to the case which follows: M. Noëll observed, in the fourth volume of the *Recueil de la Société de Médecine de Paris*, an account of a laceration of the

recto-vaginal septum, which had been happily treated; and the editor supposed the writer of that case, M. Saucerotte, to have been the first who performed the operation there described; but our author here claims a prior right to this practical discovery *.

Case of a Laceration of the recto-vaginal Septum.

The sphincter of the anus, in this woman, was torn through, and the entrances into the rectum and vagina laid into one. The author effected a cure by paring the edges of the perinæum, bringing them into contact, and confining them with a suture resembling that for an hare-lip. This accident happened in the first labour; and the woman had since then borne seven children, before she applied for relief.

Extract of a Report made by Professor Kok and Citizen Curtot, in consequence of the preceding Memoir.

The authors of this paper make some judicious observations on the manner of performing the above operation; they point out some deficiencies in the description, and suggest alterations which they think may hereafter be advantageously adopted in the manner of conducting it.

Medico-clinical Observations made at the military Hospital of Brussels. By Citizen Duval, M.D. &c.

The author gives a journal of the weather for each month in the year, and of the diseases prevalent in them, with a general account of the mode of treating them. The whole seems drawn up with attention, but cannot easily be reduced within the compass we are able to allot to productions of this kind.

A medico-surgical Case of an inveterate venereal Affection, complicated with a Caries of several Bones of the Cranium, and an hectic Fever; cured by the Use of Laffecteur's antisyphilitic Rob. By Cit. Fournier, M.D. &c.

A patient, who had chancres, took mercury without the desired success, and afterwards had recourse to empirical remedies for his cure. He endured various and long-continued sufferings, in consequence of bad management. After ten years of misery the author was consulted, in conjunction with two other respectable practitioners: at this time the patient had a considerable chancre on the glans penis; with a large node on the tibia; distressing nocturnal pains; carious nasal, maxillary,

* In the Fifth Volume of our Review, p. 149—152, we related a similar case from LODER's *Journal für die Chirurgie*, where the operation of uniting the wound by the needle and suture was successfully performed.

maxillary, and palate bones; exostoses in different parts of the cranium; and such an acrimonious stinking breath, that M. Fournier could never inspect the patient's mouth without having his lips covered with pustules! During the last six years he had also laboured under hectic symptoms, at length ending in a complete marasmus.

In this state, a vegetable diet, with Peruvian bark, and nutritious food, were had recourse to without effect. A fair trial had been given to mercury; opium was tried, from one grain to twenty per diem, for the space of four months, but it was obliged to be abandoned. The author, therefore, administered the antisyphilitic *Rob of Laffecteur*, which he had often seen produce wonderful effects where mercury failed. After taking two or three bottles, the virulence of the symptoms abated; and on taking the sixth bottle the fever entirely disappeared, and some of the decayed bones exfoliated. After the twelfth bottle, the patient was entirely cured: and, at the time of writing, it was six months since his health was re-established.

The author concludes by expressing the high opinion he entertains of this efficacious remedy; and hopes the wisdom of the French government will induce the proprietor to make public its composition for the benefit of society. But it may be questioned, we think, whether such a proceedure would not cause the *Rob* to fall into contempt.

Cases and Reflections on the Depositions of Pus which take place in the Liver, particularly after Wounds. By Citizen Curtot, of the Hospital of Brussels, &c.

The truth of the facts which are here related, of patients who had received wounds and other injuries in different parts of their bodies, having afterwards suffered from collections of pus in the liver, will not be called in question; but the explanation of these facts will probably be deemed unsatisfactory by British practitioners. The doctrine of metastatic abscesses has not yet been generally received in England.

On the Formation of Æther by muriatic Acid, or the marine Æther of Apothecaries. By J. B. Van Mons.

The author examines the different modes of making æther which have been practised to the present time, and notices the improvements made in the process, particularly that by Scheele, which he still finds to be imperfect; and then concludes with describing a method more simple, and yet more efficient, as he conceives, of obtaining this subtle fluid in the greatest possible state of purity.

Reflections

Reflections on the Influence which the Atmosphere of Brussels may have on the Inhabitants of that City. By Ph. Pollart.

In this paper the author gives a description of the city of Brussels, which he finds, as in all other places, more healthy in those parts that are elevated and less crowded with inhabitants, and less so in the lower parts, where the streets are narrow, are less ventilated, become depots of the filth from the upper parts, and are the residences of the manufacturers and the rest of the lower orders of the people. Hence fevers often arise, he says, in those parts, and become epidemic, which, in the upper parts of the city, are sporadic, attacking only a few persons. Scrofulous affections, and their offspring, tabes or phthisis pulmonalis, as in this country, are among the most common diseases at Brussels. They are supposed, he says, to be the consequences of catarrhal affections. He thinks they are sometimes infectious, and propagated "par la contact, au moyen d'un virus tabique." He therefore recommends, that the furniture, bedding, and clothes, of persons dying tabid, should be burnt, as is practised, he says, in Spain and Italy.

Memoir on the Rhus Radicans. By J. B. Van Mons, Secretary of the Society.

The Rhus radicans of Linnæus, or the Rhus toxicodendron, (which the learned author shews to be the same plant, though varying a little in its external face, from difference of soil, or other accidental circumstances,) was originally brought from Carolina in America, but is now to be met with in the nursery-grounds, or physic-gardens, in most parts of Europe. Dr. Alderson, who wrote an Essay on the virtues of this plant, which was published in the year 1793, calls it the pubescent poison oak. He was first led to notice it, he says, from hearing some accounts of its effects on the skin of persons handling it, in which it occasions itching, inflammation, with sometimes vesication, and sloughing of the part. Hearing, some time after, of the experiments made with it by M. Fresnoi, in cases of palsy of the lower extremities, he was induced to try it in similar affections on four of his patients, all of whom obtained considerable benefit from its use.

The author before us enters into a long detail on the subject. In the first part he gives a botanical description of the plant, illustrated with two engravings; then its chemical analysis, and the mode of preparing the extract; and lastly, its medicinal effects. He says, powerful effects are often produced by it on the skin of persons only walking or standing near the

plant, in the shade; of which he gives some examples. On collecting the gas or vapour emitted by the plant, at such times, he found it to be hydro-carbonate. When the sun shines on the plant, the vapour is perfectly innocent, which induced the author to suppose, that the pernicious gas was transformed by the action of the light, "par le travail de la lumiere." Of this he was afterwards convinced; for having collected the gas from a branch of the plant illuminated by the rays of a burning sun, he found it to be oxygene, nearly pure.

Van Mons gives an account of a case of palsy completely cured by taking the extract of the plant. He began with giving five grains three times a day. This quantity was gradually increased to an ounce and an half in the day, which was borne without occasioning the smallest inconvenience to the patient. As it appears that the deleterious effects of the plant were entirely subdued by the process for making the extracts, it seems probable that its medicinal powers were destroyed likewise, and that the cure in this case must be attributed to some agent, unknown or unnoticed by the author. We rather think this to be the case, as Dr. Alderson never advanced his dose of the powder of the dried leaves to more than one grain, which was taken four times in the day.

The author gives an account of a palsy of the hand cured by Dufresnoy, by rubbing the part with an oil extracted or prepared from the leaves of the plant. We do not find that the skin was inflamed by using this preparation.

Reflections on the Cachexia occasioned by the Abuse of spirituous Liquors, and on its appropriate Treatment. By F. Van Stichet, M.D. &c.

The inhabitants of the northern parts of Europe, the author observes, are accustomed to drink spirituous liquors to a degree of excess, that persons in warmer climates can have no conception of. Hence their bodies become bloated, their skins sallow, or of a yellowish colour; their appetite for food decays, and their urine, which becomes extremely high coloured, is diminished in quantity. These proceed, he says, from a contraction of the ducts of the salivary and mucous glands, &c. as is manifested by the constant thirst affecting such persons. The author takes no notice of the visceral obstructions, particularly of the liver, and its sequel dropsy, the almost constant consequence of the habit he reproves, and only proposes as a remedy for the cachexy he describes, abstinence from heating liquors, and an appropriate diet. But to persuade an inveterate drinker to quit his habit, and become temperate, *hic labor, hoc opus.* Case

Case of a considerable Mass of Hair, apparently belonging to an Infant, found within the Abdomen of a Woman. By P. J. Bavegeur, M. D. &c.

The woman who is the subject of this observation, fell down when about six months advanced in her pregnancy, and hurt the lower part of her belly. She, however, went on to the conclusion of her term, and was then delivered of a full-grown living fœtus, with the placenta, without any material difficulty. She recovered in the usual time, but not completely; a pain still remaining in the lower part of her belly, the part injured by the fall, where a round tumour was also perceived, of the size of a fist. The tumour went on increasing, with enlargement of the whole abdomen, several months, when it burst, and discharged a considerable quantity of sanious ichor; at length the orifice appeared to be obstructed by a hairy mass, which, from its bulk and hardness, the author conceived to be the head of a fœtus. The orifice was enlarged, and in a few days the mass was extracted. It appeared to lie loose and unconnected with the cell or cyst in which it had been contained. The hairs, which were in great quantity, and, on unfolding them, were found to be of the length of fifty-five or fifty-six millameters, (about two inches,) were connected at one of their ends to a fine membranous substance; whence the author conceives it to have been the scalp of a fœtus, which had been contained in one of the Fallopian tubes: but as no bones, or other parts of a fœtus, were discharged, and the woman, on parting with this mass, recovered her health, there seems little ground for this opinion. Accounts of hair, teeth, &c. found in encysted tumours seated near the uterus, have been given by Ruysch, and other collectors of observations; and these substances have been found in girls or women who had never been pregnant.

A Case of Paralysis of the lower Extremities, with an Incurvation of the dorsal Vertebræ. By P. E. Kok, Professor in Medicine, &c.

The symptoms and progress of this case were not materially different from what is usual in curvatures of the spine. The bones and ligaments of the vertebræ were affected; and the author supposed there was also an acrimonious puriform fluid, irritating the spinal marrow. He had, in three other instances, effected complete cures of palsy in the lower extremities, by exhibiting the rhus radicans; but this, we are told, was not a proper case for its trial. The plan here adopted, was to apply a caustic on each side of the curvature; at the same time

Dr. Kok employed the decoction of *uva ursi* and *cinchona*, in form of an injection for the bladder; with an infusion of the flowers of *arnica*, taken internally, according to the method of COLLIN. The event, however, was fatal.

On opening the body, there appeared to be no disease of the viscera; in the chest, a tumour existed under the common ligaments of the spine, reaching from the second to the seventh dorsal vertebra, and containing a large quantity of purulent matter. The second, third, fourth, fifth, and part of the sixth vertebræ were carious, as well as the extremities of the corresponding ribs. The membrane lining a part of the vertebral canal was destroyed, and a portion of the spinal marrow was confounded with the matter of an abscess. The diseased vertebræ were not anchylosed.

Although authors have in general considered distortions of this kind as depending on a scrofulous disposition of the spinal bones, Professor Kok thinks the present case was owing to some sort of acrimony deposited on the spinal marrow, *(à un âcre quelconque, qui s'est placé sur la moelle épinière,)* and which was formed or conducted thither by the lymphatic vessels. The affection of the vertebræ, therefore, is to be regarded as a secondary complaint, occasioned by the local irritation; and the drains kept up in the vicinity of the diseased part, according to the author, are useful only by evacuating the morbid matter. Upon this principle he recommends, in such cases, the early use of profound caustics, before the bones are become carious; and at the same time to administer internal medicines, for the restoration of the patient's general health.

Observations on a Placenta included within a Cyst, adhering to the Womb; and on several Circumstances not commonly known, which are met with in Parturition. By M. Fournier.

After waiting a proper time for the expulsion of the placenta, the author passed his hand into the uterus, where he found, he says, a firm elastic tumour; on pressing which with his finger a considerable discharge ensued, first of water, then of congealed blood. The placenta followed without difficulty, and the woman recovered her health and strength in a few days. The Society of Medicine at Paris, to whom the author first sent the case, supposed what M. Fournier conceived to be a cyst adhering to the uterus, was a large hydatid arising from the inner surface of the placenta.

The early and complete recovery of the woman shews clearly it was not a cyst adhering to the uterus. As the woman was highly œdematous, an unusual quantity of water was contained

in

in the uterus, and the umbilical chord was inordinately thickened and dropsical, it seems not improbable, that the water which was discharged on breaking the bag had been contained between the chorion and amnion, or between the laminæ of the chorion. The congealed blood was probably the lochial discharge, which had been detained by the placenta, and flowed away readily on its removal.

The author's account of this case is followed by the copy of a letter which was sent him by desire of the Society of Medicine at Paris; to which M. Fournier has subjoined his reply, containing an answer to their objections.

The last paper in this volume is entitled,

Reflections on the Use of Opium administered during Parturition. By P. E. Kok, M. D. &c.

We are here presented with an outline only of what the author has elsewhere treated more at large, in his work on the Art of Midwifery.

Art. X. *Asklepiades und John Brown; eine Parallele*: or, *A Parallel between Asclepiades and John Brown.* By K. F. Burdach, M. D. and private Lecturer in the University of Leipzig. Octavo. 170 pages. Meissner, Leipzig. 1800.

From the number of works previously published on this subject, some of which possess considerable merit, it was not a very difficult task to pursue this parallel, as there are many striking similarities in the history of both the physicians and of their doctrines. The author, however, has not merely followed his predecessors in the same track, but every where recurred to the sources themselves, and drawn from them results of his own. Besides the precision of the author's style, we were particularly struck with his partial fondness for his heroes: this sometimes betrays him into a wrong judgment; as, for instance, where he should have spoken of the failing common to Asclepiades and Brown, their contempt of all preceding physicians, and their ridiculous egotism. He even closes his work with a parallel not altogether agreeable to historic truth, of the fate of the doctrines of the two physicians whom he compares. Asclepiades's system, he tells us, has not been sufficiently elucidated by his successors; but that of Brown has been more fortunate in that respect, and would not so ingloriously pass away. But the system of Asclepiades was certainly

certainly very advantageously explained by Themison, Soranus, and others, and continued to be the reigning one for at least two centuries. And who could now venture to prophesy, how long Brown's theory may escape falling into oblivion? He likewise praises it as meritorious in Brown, that he took a comprehensive view of the whole of the science, and did not partially fix his attention on single objects. The very opposite of this we consider to have been the principal fault of the Scotch reformer, and the cause of innumerable errors which occur in his doctrine; whence, on account of his numerous inconsistencies, a regular system cannot with justice be ascribed to him. The author's account of the corpuscular system of Asclepiades is likewise incorrect. Not Epicurus, but Heraclides of Pontus was his master, from whom he adopted the notion of the ογκοι, and not that of the atoms. Galen, Sextus Empiricus, and Dionysius of Alexandria, (in *Eusebius*'s Præp. Evang. xiv. 23,) range him along with Heraclides. The ογκοι were really παδηλοι (subject to change,) not απαδεις, like the ατομοι of Epicurus, (*Sext. Empir. Phys. I.* 363.) The testimony of Galen, who considers the ατομοι to signify the same as the ογκοι, may indeed be urged against this: but when Galen and Sextus Empiricus contradict one another with respect to a point of philosophy, the preference is certainly due to the latter. Page 52, the author wishes to shew the great difference between the corpuscular system of Asclepiades and that of Des Cartes; but gives a very erroneous statement of the latter. The ογκοι of Asclepiades have a very close affinity with the *materia primi elementi* of Des Cartes. Our author is likewise in the wrong when he calls Des Cartes a genuine dogmatist, because he had constructed hypotheses on the figure and motion of smallest elementary corpuscles. Des Cartes was much too wise to esteem these emanations of a playful imagination any thing more than hypotheses; and he very clearly explains himself on the subject in his *Princip. Philos.* P. III. p. 52. But the herd of his servile followers raised these hypotheses to the rank of dogmas.

Unfounded is the assertion of our author, that Brown, like Asclepiades, has looked for the cause of life in matter itself, and held excitability to be the result of the greater and less fineness thereof. Brown, however, with commendable prudence, never explained himself on this subject; and, indeed, no one who knows the bounds of human knowledge will either assert or deny the dependance of life upon matter. In one passage only, he says, that the nervous and the muscular substance

substance were the seat of excitability. But it is evident, at first sight, that this means a quite different thing; and Röschlaub, who is the most zealous apostle of the Brunonian system in Germany, goes so far as to maintain the singular, and certainly not very philosophical doctrine, of excitability being independent of matter. Finally, Mr. Burdach thinks it a thankless labour to look out for traces of Cullen's system in the writings of Brown, or to shew the affinity between their doctrines. We must own, that we should have considered such an investigation to be the most instructive part of our author's work; as it is by such an examination only that we can discover what was peculiar to the Scottish reformer, and what he borrowed and only embellished and improved upon.

[*From the Jena Review.*

ART. XI. *A practical Treatise on Diet, and on the most salutary and agreeable Means of supporting Health and Life by Aliment and Regimen. Adapted to the various Circumstances of Age, Constitution, and Climate; and including the Application of modern Chemistry to the culinary Preparation of Food.* By WILLIAM NISBET, M. D. Fellow of the Royal College of Surgeons, Edinburgh; Author of the Clinical Guide, &c. &c. Duodecimo. 429 pages. PHILLIPS, London. 1801. Price 6*s.* in boards.

THE utility of books professing to teach the multitude to speculate on their own diseases, and prescribe medical remedies every one for himself, is at best extremely questionable; but, if there were any one desideratum in English literature more urgently wanted than all others, that has hitherto undeniably been a work which should, with the skill and discernment of an able and experienced physician, assemble, for popular use, all the dictates of ORDINARY DISCRETION, general EXPERIENCE, and uniform PROFESSIONAL OBSERVATION, in regard to the most salutary use of those things which serve as the common ALIMENTS of human life. No danger is to be feared from instructions popularly taught, in regard to this subject. The prudent use of aliments might happily prevent two thirds of the diseases by which health is destroyed. Hitherto medical men have directed their cares, much rather to the cure than to the prevention of disease. However they might incidentally touch on the use of aliments, they have not produced any thing that we can regard as a "system of the dictates

dictates of common sense and medical prudence on this very comprehensive and interesting subject."

Such, we with pleasure announce, is the character of the book now before us. It considers aliments as taken into the human frame, by the skin, by the lungs, and by the stomach. Air, water, different species of clothing, &c. are examined as forming or affecting the aliments received by the skin. Respiration is explained in all the circumstances variously influencing it, as the means of taking in aliment by the lungs. Every article of common food, whether fish, flesh, vegetable, salt, or liquid, is examined in its power to act with salutary or pernicious influence, in the different proportions, modifications, and conditions in which it may be received by the stomach. The lights of chemistry are afterwards employed to explain the intimate relations between the articles of food and human nourishment. The work concludes with a brief view of the nature of those changes which are effected by the operations of cookery.

On every different head nothing is said but what must immediately meet the approbation of the reader as sound good sense. The formalities of science are avoided, but its spirit is happily infused throughout the whole. A style better adapted to instruction of this sort, we do not remember to have examined; it runs easy, perspicuous, pure, without ambitious ornaments, light, and happy; it resembles, more than that of any late publication, the exquisite style of Goldsmith in his Essays, and his History of animated Nature: like Goldsmith's style, too, it is not without slight inaccuracies, from which we could have wished it free; if this might have been, without its becoming more clumsily stiff and formal.

Dr. Nisbet is one of the very few medical writers among our contemporaries, who know how to unite science with lucid and insinuating simplicity of manner. In his present work he has performed a service which deserves the thanks of every good man, zealous of public utility. No family ought to neglect the purchase and perusal of a book so agreeable and so interestingly instructive. How much might life be lengthened and rendered more happy, if its precepts were universally obeyed!

The following extracts will sufficiently illustrate and confirm our critical opinion;

The Author's Plan.

"While a superficial acquaintance with the science of medicine is condemned, we are equally averse that any mystery

should hang over it, or that the veil which has been withdrawn from the other branches of knowledge should continue its obscurity here. Let the principles of medicine be once fairly known, and let its precepts be directed by judgment and experience, it will be then of little consequence whether its aid is bestowed by a professional hand, or by the zeal of humanity and friendship. To assist in doing this is the object of the following treatise, in which we shall consider as the extent of our subject the various means of supporting life, as applied—

" 1st, To the surface or external part of the body;

" 2ndly, To the lungs, or what we may term the intermediate surface; and,

" 3dly, To the internal parts, through the proper organ of the stomach.

" We shall next examine the action of the body, as modifying the power of these means of support when introduced into the system; then consider the influence of the mind as affecting the body in the same way; after which we are naturally led to trace the passage of the various alimentary matters from the body, in their different altered and assimilated states, through the several evacuations; and lastly, we shall be prepared to concentrate in one detail the various means for the preservation of health, and to mark the circumstances to which the prolongation of life is chiefly to be attributed; concluding this systematic view of the subject with an abstract of the general principles of chemistry, as applied to this part of medicine, first in the detection of the component parts of diet, and secondly in their various preparation for the purposes of nourishment and the delicacy of the table.

" Thus we shall be led to trace the human body as a wonderful system of parts:

" By the lungs drawing life and heat from the surrounding atmosphere:

" By means of the stomach supplying itself with nourishment from the various parts of creation, for the preservation of its animalization and form:

" Then removing, first, the useless part of this nourishment by the intestines:

" Secondly, discharging the accumulation of the animal principle derived from the same nourishment by the lungs: and,

" Thirdly, giving outlet to the various saline products arising from the operations of the economy, by the kidnies, the skin, and the other lesser excretions."

"*General Remarks on the Flesh of Fowls.*

"Fowls afford a more wholesome and delicate diet than quadrupeds. It is easier also of digestion; but they afford at the same time a less proportion of real nourishment. Nor is their nourishment so general as that of quadrupeds, some parts of them being always tough and insipid, from their manner of life. Of birds, a greater number of the carnivorous kinds are eat than of quadrupeds; but they are, however, chiefly those that live on fish, from which indeed they acquire a peculiar taste, but this is by no means so unpleasant as that of carnivorous quadrupeds. The time of using fowls requires more to be studied than that of quadrupeds, as they are frequently out of season, particularly in spring, when they pair; and where they are birds of passage, or migrate from one place to another, they require some residence, or to be in case, before they are fit for use.

"Fowls as well as quadrupeds are much improved in size and fatness by domestication; but this is of two kinds—the first is making them familiar, and allowing them to feed as they please, which in the hen kind is known by what are called barn-door fowls—the other is properly *cramming them*, that is, shutting them up for the sole purpose of feeding. These arts of feeding no doubt give more succulence and tenderness to the food, and increase its alkalescency. From giving succulency they are an improvement; but from increasing alkalescency, they render the food more unfit for weak stomachs and convalescents, by whom this species of food is much used, though at the same time they render it more easy of solution. Exercise is necessary to give perfection to all food, for by this means the fat of the animal is equally dispersed through the muscular parts; while, when fatted hastily, it is accumulated in the cellular membrane. By the domestication, also, of fowls in general, their peculiar flavour, on which their excellence depends, is lessened; and by cramming them it becomes entirely lost. Hence also, unless their fibres are very tough, roasting is to be preferred to boiling them, on the same account."

"*Salmon.*

"The salmon is a very extensive article of food, and is used in three ways, either fresh, cured, or smoked. It is of a tender substance, sufficiently succulent and nourishing, but at the same time somewhat oily, and therefore heavy on the stomach. It differs in its richness and alkalescency according to the particular places in which it is taken. When middle-

aged

aged it is in most perfection, and it should neither be eat [eaten] too young nor too old.

" Salmon trout differs chiefly in being soft and gelatinous.

" *Pike.*

" Pike is a fish of prey, and feeds on the smaller species. Hence it is termed the water wolf. Its flesh is short, compact, and close in its parts. The river pike is the best of this species, and considered as the least heating, though somewhat hard of digestion, and lying heavy on the stomach. It differs, however, much in different countries. It is also best in the winter season. This fish has been recorded as very long lived; a fact confirmed by the story of the one thrown into a pond by the emperor Frederick the Second, with a brass ring about its neck, which was caught two-hundred and sixty-two years afterwards. The truth of this, however, may be called in question.

" *Carp.*

" Carp is a fish very long lived, and was first introduced into Britain in 1514. Like the pike, the river carp is the best. It often grows to an amazing size, and has been known to weigh two hundred pounds weight. It is best food in March, May, and June. It is not so dense as the pike, and therefore easier of digestion. The older it is, it becomes the firmer, better tasted, and more wholesome. From the spawn of this fish is made the caveare, a dish much used by the Jews. This fish can be made to live a considerable time out of water, and will even, by a particular mode of treatment, grow fat.

" *Perch.*

" The perch is a food superior to the two former, and is of two sorts, the river and sea perch. It is of a firm texture, but a tender substance, easily soluble, not glutinous, not heating, nor remarkably stimulant. When young its flavour is best, which it loses by age, and becomes rather ill-tasted. The best for use are the middle-aged. They should never be used in the months of March or April, which is the spawning time. They are best caught in clear water, for marshes and muddy places vitiate their flavor.

" *Whiting.*

" The whiting is a sea fish, tender, white, and delicate, with little gluten or viscidity, and therefore proper for the most weakly stomachs, conveying little stimulus to the system. The best sort are short, and they are much valued as an article of food.

"*Haddock.*

"The haddock is a sea fish, and much resembles the whiting, but is firmer in its texture, and in general much larger in size. It is caught in high perfection in different parts on the coast of Britain, particularly in the month of January.

"*Cod.*

"The cod is also a sea fish, of a more dense and glutinous texture than the two former, and its delicate parts are the glutinous ones about the head and the sounds. It is used of three kinds—the fresh cod, the green or white cod, and the dried or cured cod—the difference lying in the preparation of the two last, the one being salted and barrelled for use, the other being salted, and dried in the sun, or smoked. The green cod generally comes from Newfoundland; the dry cod, again, is taken on the coast of Placentia and Scotland. Both these kinds require to have their salt much extracted, by immersion in water, before being used. The pickle of cod is frequently used as an external application of a dissolving nature.

"*Eels.*

"Eels have no exercise, are fat and slimy; they contain much nourishment, but are difficultly perspirable; they are well tasted, but, from their viscidity, are apt to lie heavy on the stomach. They are dressed in a variety of ways, but are lightest when roasted, and should be well seasoned with condiment, particularly vinegar and horseradish, for when long retained on the stomach they become heating and oppressive. The best kind are taken in clear water. They are very retentive of life, and have been known to live five or six days out of water. From the skin a mucilage is made, reckoned of sovereign virtue, by the vulgar, in swellings.

"*Tench.*

"The tench is a fish of a delicate taste. It feeds generally in muddy places, and is said to be the only fish that the pike spares. When it can be procured from clear water the flavour is always superior. It was much under-rated by the ancients, but in modern times it is esteemed as equal to carp. Its name it derives from the peculiarity of its colour.

"*Trout.*

"Of this fish there are a great variety, but the salmon trout is the best, being soft and gelatinous, and at the same time somewhat stimulant and alkalescent. All trout, indeed, are a very putrescent food, and therefore easy of digestion. They should be eat in their freshest state, and taken, if possible,

sible, from running water. They are best in summer, for then they are in best condition, and their flavour most delicate."

"*Corstorphine Cream.*

"Besides cheese, another form in which the curd is used in one part of Scotland, is in what is termed Corstorphine cream. This is made by filling a vessel with skimmed milk, which has a hole in its bottom stopped with a peg; this vessel is placed within another filled with boiling water; and when this is done, it is allowed to remain in this situation for a day or two, according to the state of the weather; at the end of this period a coagulation of the milk has taken place, and the watery part of it subsided to the bottom. This watery part is then drawn off by opening the peg at the bottom of the vessel, and being again stopped up, the same operation is continued for twenty-four hours longer, when an additional water is again drawn off, and the consistence of the curd is thus rendered pretty thick; it is then agitated briskly with a wooden stick, and made fit for use. This form of curd is much used in the neighbourhood of Edinburgh; it forms an aliment tolerably nourishing, and in summer, from its proportion of acidity, is gratefully acid and cooling."

"*Rice.*

"This grain is the chief support of the greatest part of Asia, is the general vegetable aliment of the East, and has been even long employed in Europe for the same purpose. The peculiar qualities of this grain are not easily ascertained. It discovers little sweetness, and it is not much disposed either to acescency or fermentation. But from its effects it is evident its nourishing parts must be in great proportion. Of all the grains it is certainly the most innocent, and the most useful in the case of invalids: it contains a thin, light and very soluble mucilage, which not being so disposed to acidity as the other mucilages of grain, it is therefore lest flatulent, and sits easy on the stomach. It has been supposed to possess something of an astringent quality, and has therefore been ordered as a common remedy in bowel complaints; but it shews no marks of an astringent quality when put to the test; and its good effects can, therefore, only arise from its demulcent nature, as blunting acrimony, and soothing irritation. The nutritious quality of rice has been supposed by some, attended with one noxious quality, viz. being hurtful to the eyes, on no rational or satisfactory foundation. The weakness of sight, and blindness of the Chinese, has been indeed ascribed

cribed to the frequent use of hot rice; but how this can operate, it is impossible to conceive, or in what manner it should differ, boiled, or in this different state, excepting in temperature and softness, which can only increase its solubility in the stomach. The source of impaired vision, therefore, is more to be sought for in the abuse of venery among that people, with their immoderate indulgence in tea, and in other narcotic and aromatic stimulants.

"Rice is used in a variety of ways—in jelly, or decoction, which is made with it in the same way as with barley and oats, formerly noticed. Its chief consumption, however, is in puddings, and it is used as an ingredient in stews. Lately an attempt has been made, by mixing it with wheat, to form it into bread, in the proportion of three parts of wheat, to one of rice; and one peculiar quality it is said to possess, that its mixture corrects bad wheat flour. In this climate, rice is generally very quickly digested, and the return of appetite takes place soon after its use. In the warmer climates, however, from the relaxed, debilitated state of the stomach of the inhabitants, it is found necessary, in order to prevent its lying long upon them, to conjoin it with a considerable quantity of strong spices. This grain is very much used in Carolina, and no bad consequence is found to follow it; a proof of the insufficient grounds on which its tendency to produce blindness is built.

"On the whole, this grain, both for extent of produce, its proportion of nourishment, and its goodness, is preferable to all others; its flour being finer, and its texture more tender than any of them, which is particularly apparent by macerating the different grains in water, for of all of them the rice swells to the largest size; a proof its parts are more intimately divided."

"*Potatoe.*

"As an intermediate substance between the farinaceous seeds and roots, we have placed here, though properly belonging to the roots, the potatoe.

"The potatoe was first introduced into Europe in 1486, by Sir Francis Drake, and is originally a native of Peru; where, unless reared under a particular management, by little exposure to the sun, it possesses much of the quality of the nightshade, to which species it belongs. The potatoe is now a root of the first importance in Europe, as affording a mild wholesome nourishment; and next to the grains, it is most used of any vegetable production. The attention paid

to

to its cultivation has produced a great variety of species * of it; and they may be yet increased from the seed contained in the apples; but this variety differs only in the proportion each possesses of its constituent parts. The light, mealy potatoes are the best. The constituent parts of this root, when examined, consist: 1. of a dry powder, or starch, as in grains: 2. a fibrous matter, of a gray colour, similar to the roots of pot-herbs: and, 3. a mucilage, resembling that of the esculent plants. By the process of boiling, these parts become intimately blended, have their solubility increased, and become easier digested. This root, in many countries, affords the chief proportion of their nourishment; a proof of its wholesomeness and alimentary quality, for both men and animals are known to get fat under its use; though, in proportion to bulk, it does not afford the same quantity of nourishment as the grains. From its possessing such a large proportion of watery parts, nearly one half, it cannot fail to be easily digested, and to pass in a very short time into chyle. Hence it is by no means of itself a permanent nourishment, and the appetite sooner returns after it than after most other kinds of diet. Flatulence and heartburn are also very seldom known to arise from it, though continued in very great quantities; and in many cases where vegetable diet comes to be prescribed, it has been the only substance found to agree. From its constituting an article in such general use, it has come to be prepared in a variety of forms. It is used in bread, its flour is employed in pastry, and it is also converted by the French into a sago and salop.

"Though we have mentioned the potatoe as a root, it is not properly the root of the plant, but rather a sort of underground fruit, produced upon a confined branch. The real roots do not produce potatoes; they only serve the purpose of drawing nourishment from the soil, as the leaves above extract it from the atmosphere. The potatoe below, and the apple above, are in fact the same; but being in different elements, they assume different appearances. The one seems to be intended for the preservation of the species, the other for the food of animals. Such is the prolific nature of this vegetable, that from one large potatoe 8st. 8lb. of good sizeable ones have been produced. As an article of sustenance, the potatoe

* The author should have said a great many varieties; for it does not appear that different species of it, botanically speaking, have been produced by culture.

potatoe is greatly recommended by its palatable nature, and by its being reared at little expense. Hence it is well suited as a provision for the poor. Potatoes are never unwholesome but from being reared in a bad soil, improperly preserved, or eaten to excess; circumstances which can all be easily guarded against. Given raw, they have been found highly useful in scorbutic complaints.

"By some authors, potatoes have been considered as possessed of noxious qualities. But experience gives no sanction to this opinion; and had it been just, the truth of it must have been completely established long before this time in an article which forms so much the diet of the poor in every country, and especially in Ireland, where, on the contrary, the most healthy people are reared."

"*Morbid Effects from Mushrooms.*

"Where mushrooms prove deleterious, the first sensations they produce are qualmishness, which soon increases to violent sickness: this is succeeded by giddiness, a palpitation of the heart, and flushing heat of the skin; with more or less redness of it. Swelling of the face also ensues, and sometimes a sensation all over the body, as if a general fulness or swelling prevailed. The patient stares in an unusual manner. All objects appear different from what they did before, a difficulty of breathing ensues, and the mind is strangely confused. Delirium and convulsions have been also known as frequent consequences of this attack. In other cases where the symptoms are mild, and do not appear for a good many hours after eating them, the sickness ends in cholera morbus, on the termination of which, the patient generally falls into a sound sleep, or a somewhat comatose state.

"To relieve these symptoms as speedily as possible, the clearing the stomach of its noxious contents should be the first step; and the best emetic for this purpose is ten grains of the vitriolated zinc, which may even be repeated if the sickness does not abate. The emetic is then to be succeeded by the vegetable acids, which should be given in pretty considerable quantity, either in the form of vinegar or lemon-juice. These will be found an antidote against what remains of the poison.

"*Tea.*

"Tea is the dried leaves of a shrub, the produce of China and Japan. It is divided into two varieties, green and bohea, which vary somewhat in their particular flavour and taste, though they agree in the general qualities of being slightly

astringent, bitterish, and aromatic. In their recent state they are possessed of a strong, narcotic property, which is carefully diminished by maceration and drying, so that the acrid juice in which it resides comes to be considerably dissipated. They are dried on iron plates, from a part of some tincture of which their astringent quality is derived; and so dangerous are they held by the Chinese, as not to be used for a twelvemonth after they are plucked. Thus only by a preparatory process are they rendered at all fit for the purpose of diet.

"Tea was first imported into Britain about the year 1666, and was confined for some time to the tables of the people of fashion; but in consequence of the pleasantness of its flavour and its fascinating effects, it soon gained a preference over every other diluent beverage, and came into general use. Hence it has shared the fate of all articles in universal demand. Its qualities have been sophisticated, and it has received additions, altering its nature in some degree from what it was on its first importation. These additions consist, first in concealing a deficiency of natural flavour, or aromatic part, by the olla fragrans; secondly, from less attention being paid to the periods of gathering it; and thirdly, from care being employed in the time of curing it, or preparing it for use.

"The general effects of no dietetic article are perhaps so little determined as those of tea. By one party it is decried as a poison, by another it is extolled as a medicine of the first virtues. Truth, however, seldom lies in extremes; and in order to form a just opinion of this important subject, we should examine, first, its effects in a state of concentration; secondly, in the form it is most used; and thirdly, trace the different situations of those who use it. With respect to the first, we find that, formed into an extract, or with its juice inspissated, it has been known to kill in the quantity of a few grains. The distilled water has been attended with the same fatal consequences, or, if not extinguishing life, it has produced incurable palsy. Even the effluvia of this herb, long smelt at, has been known to produce apoplexy; and several tea-brokers, who are accustomed to smell every box that is opened, have fallen victims to their profession in this way. These facts then sufficiently prove the powerful narcotic qualities of this plant, when employed in sufficient strength, or in a concentrated state. Experiments also made with it on small animals have produced the same fatal issue, and that in a very short space of time after the application of the infusion. The

green tea seems also the most powerful, or possesses the greatest proportion of that active principle on which these effects depend. Indeed all the high-flavoured teas possess it in an eminent degree. In the common form of infusion in which tea is employed for dietetic use, none of these consequences arise. In the East it has been used in this form from time immemorial; but in England it did not become common till after the restoration, when it was introduced at court by Katherine of Portugal. From this time it has gradually come into general use, so much so, that the importation from China in 1777, was upwards of sixteen millions of pounds, and from that time to the present it has increased to no less than thirty million. On its first use, it was generally prepared in decoction, or boiled in a kettle, either in milk or water, the Eastern method; but by this preparation its aromatic quality was considerably impaired. The infusion, therefore, in Europe, though different from the Eastern method, has been preferred; and by this infusion its narcotic quality is, perhaps, retained more strongly than when part is dissipated by boiling.

"The excellence of this infusion will depend on three circumstances, the degree of heat of the water employed, the softness or quality of the water, and the time allotted for the infusion.

"With respect to the first, the water should always be brought to the boiling point, and continued as nearly as possible in that degree of temperature; in regard to the second, the water should be mixed as little as possible with any adventitious particles of a saline or mineral nature; and with respect to the third, the vessel employed should be so large as to keep the infusion of an equal strength.

"The effects of tea drunk in this way are to increase the digestive action of the stomach, and to augment the appetite. Hence it is particularly useful where the stomach is overloaded, and nourishment is taken to excess; but in the same way, where nourishment is deficient, or where the stomach is unable to receive it, like all other powerful stimulants, it must tend to injure the organ, and shew all the bad consequences of its narcotic quality, in exciting various morbid affections of the nervous system. It is in this way that its introduction into Europe has proved so pernicious to the lower ranks of society. Instead of an auxiliary to diet, as it ought to be, it has come to constitute the principal part of it, and is drunk at all times of the day, and in such a state of concentration as to act as a real poison upon the body. Indeed to this herb, more than to

any other cause, we may attribute that change in the constitution of the inhabitants of this country, which has displayed itself so remarkably within this century. Formerly nervous complaints were little known or understood, now they are most frequently met with; nor can they be attributed to any other cause, as the introduction of no other dietetic article has been in equal extent within such a short period of time. The highest degree of these complaints, palsy, we find increased as four to one within the last thirty years. Hence the use of this article requires more caution, and attention to counteract its pernicious consequences, than any other with which we are acquainted. These consequences steal on by degrees: it affords a beverage fascinating to the taste; it excites a momentary hilarity of spirits after its use, and it is not till after some hours of enjoyment of this exhilarating state that the faintness and sinking, correspondent to the previous excitement, ensue, which calls anew for the same repetition of it, or some other stimulant, to produce a similar effect. The drinking of tea, therefore, should only be conjoined with a due proportion of nourishment. Its narcotic effects should be corrected by boiling rather than infusion; and in some countries it is common to correct this effect by its junction with certain aromatic or sweet herbs. It is rendered grateful to the taste by the addition of milk and sugar, which should always bear a greater proportion in the making of it than they at present do."

A glossary of medical terms, a well-arranged table of contents, and a convenient, accurate index, appear in their proper places in this work.

ART. XII. *An Inquiry into the Nature and Cause of that Swelling in one or both of the lower Extremities, which sometimes happens to lying-in Women.* By CHARLES WHITE, Esq. F.R.S. Member of the Royal College of Surgeons in London; Vice-president of the Literary and Philosophical Society, and Man-midwife Extraordinary to the Lying-in Hospital of Manchester, &c. Part II. Octavo. 134 pages. MAWMAN, London. 1801. Price, common paper, 3*s.* 6*d.* Ditto, fine, with coloured plates, 4*s.* 6*d.*

THE public have been long acquainted with Mr. White as the author of several useful medical and surgical works.

It gives us great pleasure to observe (and we are sure our readers will agree with us,) that time has not abated his eager-

ness after physiological inquiries, or his attempts to investigate the nature and causes of those evils so inseparable from our formation, and which we are so interested in alleviating. That Mr. White is well qualified to discuss this particular subject will be readily granted on perusing the following extract:

"Although it is an unpleasant thing for a man to speak of himself, it may be necessary to those of his readers, who live at a distance, to say that he is at this time, and has been for more than half a century, in full practice in midwifery, among women of every rank or condition of life. He had, in the early part of his practice, the care, for many years, of all the parish poor in the populous town of Manchester, and in a very considerable circuit of its environs. This was at a time when there were few men-midwives, scarcely one in fifty in proportion to the present number, that branch of the profession being then principally in the hands of women: the men were only called upon in cases of emergency. For the last ten years the author has been 'Man-midwife Extraordinary to the 'Manchester Lying-in Hospital and Charity, for delivering 'poor married Women at their own Habitations;' during which time there have been delivered under that institution 8000 women. Previous to that time he was surgeon to the Manchester Infirmary 38 years. He thinks therefore he may safely say, though there may be many men who have attended more women in natural labours, yet there are none, now living, who have attended so many difficult cases of parturition, and of diseases in consequence of it.

"The author is in possession of a museum, furnished with every useful preparation, both wet and dry, which are necessary for giving anatomical lectures; where public courses were delivered in 1787 and 1788, by his late son Dr. White, and they have been repeated these two last years by his worthy and ingenious friend Mr. Gibson. He has the satisfaction, and, he may say, the advantage of being upon the best terms with most of the faculty in the town of Manchester and its neighbourhood. The reader will therefore see that he has not been wanting in opportunities for observation."

And his reasons for now appearing before the public are,

"1st. Because the disorder has been confounded with others, even by men of science.

"2dly. New facts have occurred for the further elucidation of the subject. And,

"3dly. His description of the nature and cause of the disease

ease has been controverted, and other theories advanced in its place."

The present performance is written in a clear easy style, and will not diminish the author's reputation. It is intended to combat the arguments of Mr. Trye, Dr. Ferriar, and Dr. Hull, all of whom have made some objections to Mr. White's hypothesis. The author sets out with strongly insisting on the necessity of examining the disease in its complete, simple, and uncomplicated state, and he has described what he considers the true disease, and which he now entitles *phlegmatia alba dolens puerperarum*, in the following words:

"The pathognomonic symptom of this disease is a swelling of the whole labium pudendi, on the same side only, on which there is a firm, glossy, warm, tense, elastic, painful, sudden swelling, of a pale white colour, which attacks the hypogastric region, the loins, nates, groin, thigh, leg, and foot of a lying-in woman; and I must beg leave to impress this upon my readers, that, when one limb only is affected, the swelling is confined so exactly to the labium pudendi of that side, that, if a line were drawn from the navel to the anus, it would be found never to go beyond that line in the smallest degree; and I must observe, that this pathognomonic symptom of the swelling of the corresponding labium pudendi only is never wanting, in any case whatever. About nine times out of ten it attacks one side only, and the limits are so exactly drawn, that in no case whatsoever does the swelling rise higher than the loins and hypogastric region, nor spread wider than the spine and the linea alba: and this is so constantly and invariably the case, that it may confidently be said, 'So far shalt 'thou go, and no farther.'

"After carefully reviewing the cases which have fallen under my own inspection, those of my friends and correspondents, and those upon record, I am well satisfied that there is not one of the genuine disease, in its simple uncomplicated state, sufficiently authenticated, that ever proved fatal; not one that was ever attended with any external inflammation, abscess, gangrene, or bursting of the skin, in the legs or thighs, as in anasarca. That though the pain sometimes begins in the ham, or the calf of the leg, yet the swelling never begins so low. Mistakes have arisen on this head, from the patient not thoroughly understanding the question, whether it was the pain or the swelling which began there. Though it sometimes attacks women in both the lower extremities, in the same or in different lyings-in, yet it never attacks the same side more than

than once, and it never attacks women after a miscarriage in the early months of pregnancy*. There are no red or purple streaks running up the limb, no inflammation on the skin, nor any visible inflammation whatever. The skin not only loses its natural colour, and puts on the appearance of a milky whiteness, but all the blue veins disappear, even the varicose ones, if they had been such, before the disease began; and there is less appearance of blood in the limb than in a natural state. There is no sensation of itching nor throbbing in the part; the pulse, though frequent, is neither full, hard, nor strong; no absolute nor relative plethora in the part, and frequently none in the system generally. The limb is not lessened by an horizontal position; the impression of the finger is not left upon it, nor does it issue any fluid, if punctured with a lancet, when the disorder is at its acmè, and seldom when it is upon the decline.

"The great pain in the loins, and in the hypogastric region, afterwards in the conglobate glands, in the groin, ham, and the middle of the leg, and lastly in the whole lower extremity, appear to be solely in consequence of sudden distention. There can be no metastasis or translation of matter from one limb to the other, for though I have never known the disorder commence exactly at the same instant in both the lower extremities, I have known it complete in both at the same time."

The author contends, that the cases adduced by Dr. Ferriar, Mr. Trye, and Dr. Hull, are not cases in point; that they are defective in many of the principal symptoms of the true disease; and he has given us copious extracts from all of them, to prove the distinction which he considers as essential. In order to shew that the lymphatics are liable to burst under particular circumstances, he has given us quotations from the works of Mr. Astley Cooper, Dr. Latham, Mr. Hewson, Dr. Baillie, Mr. Cruikshank, &c. &c. &c.: these extracts, which make nearly one half of the book, we suppose the author thought necessary to support his idea of the nature and cause of the disease, as he maintains that it is owing to a rupture of those particular lymphatics which run under Poupart's ligament, and over that portion of the os pubis which makes a part of the brim of the pelvis, and that their rupture and this disease

* "Though I have received information of this disorder happening to the same limb more than once, and of its happening after miscarriages in the early months of pregnancy, yet, upon strict inquiry, I never found it verified."

disease are generally occasioned by the pressure of the uterus during labour. That our readers may not mistake the author's meaning, we present them with an account of the nature and cause of the disorder in his own words:

"When the brim of the pelvis forms a prominent line on the body of the os pubis, and is as sharp as an ivory paper folder, or as some knives, and jagged like a saw, and the gravid uterus, by the violence of the labour pains, forces the lymphatics against this sharp edge, it must cut or lacerate those lymphatic vessels which wrap round it, and dip down into the pelvis, and they will discharge their contents. In some cases the extravasated lymph will be immediately absorbed by the lymphatics in the neighbourhood: in others it will accumulate, coagulate, and give pain, some days prior to the swelling of the limb, by separating the peritoneum from its connexions with the adjacent parts, and at last will be absorbed; but in some few cases it may not be absorbed, but produce an abscess. In a space of time, generally betwixt twenty-four hours and six weeks, the orifices in the ruptured lymphatics will close, and they will be gorged with lymph, which will be impeded in them, but it will continue to flow in those which have not been ruptured, particularly in the deep-seated lymphatics which accompany the iliac artery, and by anastomosing with those which have been ruptured, will prevent any material injury for the present, and in time will entirely supply their place. By the obstruction of the lymph, the groin, labium pudendi, and upper part of the thigh, swell, the tumour gradually extends towards the leg and foot, and grows very painful, white, tense, elastic, hard, glossy, and uniform. The pain is occasioned by the great and sudden distention of the lymphatic vessels; the whiteness, by the parts being filled with lymph, and compressing the blood-vessels so much, that neither arteries nor veins appear externally. The tenseness, elasticity, hardness, and glossiness, depend on the great distention of the lymphatic vessels, which do not easily give way; the uniformity of the swelling, on the distention of the cutaneous lymphatics, which are innumerable. By this great distention, and consequent compression, the exhalents are prevented from secreting so much lymph, and consequently there is not so great a supply. The lymphatic glands sometimes grow painful and swell, which is owing to the vasa inferentia sending the lymph into them quicker than the vasa efferentia can discharge it. Pains will sometimes attack parts which have neither lymphatic glands, large nerves, blood-vessels,

sels, nor lymphatics, which can only be accounted for from sympathy. The words *calidus*, hot, or warm, when speaking of the swelling of the limb, are made use of in contradistinction to *leuco-phlegmatia*, in which the limb is white and cold; in this disorder it is white and warm. When speaking of increased heat, it is to be understood of the whole body, not of the limb alone, as that does not appear to be hotter than the other parts of the body. There is heat in all fevers, but that does not imply inflammation; every fever is not inflammatory. There is a quick pulse, but that is owing to irritation, by the sudden and violent distention of the irritable coats of the lymphatic vessels.

"If you puncture the skin with a lancet, the lymph does not flow out as in anasarca, where it is thin, and is lodged in the cells of the cellular membrane, which communicate throughout the whole body. In this disorder you do not puncture the trunks of the absorbents, but the minima vasa only of the cutaneous lymphatics. The violent pain and distention do not continue many days; the anastomosing lymphatics begin to enlarge, and by degrees carry off the obstructed lymph; but it is many weeks before it has obtained a perfectly free passage.

"This disorder has not been known to return in the same limb, though women have had several children after having had this complaint, because the same accident cannot happen a second time to those lymphatics."

With respect to the method of cure, the author has not given us any thing new; it is merely prescribing for the symptoms; this we imagine the author has not thought necessary, since he believes a cure cannot be effected till a deeper seated order of lymphatics take upon themselves the whole office of absorption for the limb, in the same manner that small branches of arteries enlarge after the operation for the aneurism. We apprehend our readers will not entirely agree to Mr. White's very circumscribed view of the colourless swelling that attacks the lower limbs after delivery; to us it appears probable, that a more enlarged idea of the nature of these affections would have been more consonant to the experience of accoucheurs, since every person in moderate practice must have occasionally seen examples of this disease where the lymphatics were certainly *inflamed*, where they have been *ruptured*, and where the swelling of the labium has not been remarkable, or not so exactly *circumscribed* by the line marked out by Mr. White as its boundary, and yet have been conformable to the general

ideas

ideas of Dr. Ferriar, Mr. White, and others. However, we should the more readily agree to Mr. White's limited acceptation of phlegmatia alba dolens puerperarum, if he had shewn us any peculiar new method of treating *his* species, where the same practice would not have been applicable to the disease as described by Dr. Ferriar, Mr. Trye, and Dr. Hull: this our author has not favoured us with, and our own experience warrants us in saying, we have certainly seen the *white leg*, *depot de lait*, or *œdema lacteum*, attended with the symptoms and circumstances mentioned by Dr. Ferriar, Mr. White, Mr. Trye, and others, and all of them occasionally proving slight or serious, according to the constitution of the patient, or their combination with other diseases.

The work is embellished with four plates, shewing the sharp ridge of the pubis, with the lymphatics as they mount over it and dip into the pelvis. They are neatly executed.

We have no hesitation in pronouncing, that this pamphlet will be read with avidity, as every thing must be from the pen of so able and experienced a practitioner as Mr. White.

MEDICAL CORRESPONDENCE.

Art. 13. *An Analysis of the Kilburn mineral Water.* Communicated by JOHN BLISS, Member of the Royal College of Surgeons in London.

THE following analysis was undertaken for the purpose of ascertaining, with some degree of accuracy, the component parts of this water, in consequence of an intimation lately given, in my analysis of that of Hampstead*, that an union of the two would form a compound somewhat similar to the waters of Cheltenham and Scarborough.

At that time I was unacquainted with there being any other account of it than that of Dr. Hales, who had merely stated, that the solid contents obtained from a gallon were 344 grains.

When I had proceeded some way in the experiments, an analysis of it by the late Mr. Schmeisser, published in the 82d volume of the Philosophical Transactions, was put into my hands. I was encouraged, rather than deterred from proceeding, when I found he had obtained (as he supposed) sulphurated hydrogen gas from it, in the proportion of twelve cubical inches in a gallon.

* See the xxviith Number of the London Medical Review, p. 244.

In my frequent visits to the well, I had not the least impression on my senses, when the water was at rest, that it contained the smallest quantity of that gas; and the subsequent experiments fully authorize my asserting, that this water is not naturally impregnated with it, but that its existence is merely adventitious, and would be generated in any spring or rain-water exposed under similar circumstances.

Although our sums total are nearly correspondent, yet we vary a little in the proportions of some of the saline contents; a circumstance that may be accounted for by the change which waters of this nature are continually undergoing.

On this occasion I have, in preference to the Bergmanian method of investigation, principally employed the more accurate one by *estimation*, recommended by Kirwan, which in cases where there are a variety of associated salts is the most exact.

I have likewise adopted that gentleman's calculations; and their correspondence will be found to be exact, on referring to his excellent Essay on the Analysis of mineral Waters.

Kilburn Well is situated at the south-western extremity of the parish of Hampstead, and about two miles from Tyburn turnpike, in the road leading from thence to Edgeware.

The spring rises about twelve feet below the surface, and is enclosed in a large brick reservoir, which bears the date of 1714 on the key-stone of the arch over the door.

The water collected in the well is usually of the depth of five or six feet; but in a dry summer it is from three to four, at which time its effect as a purgative is increased.

Its temperature near the surface is 48°, when the surrounding atmosphere is at 62°.

Its specific gravity exceeds that of distilled water in the proportion of 1012,5 to 1000.

When taken fresh from the well, a few inches under the surface, it is tolerably clear, but not of a crystal transparency; at first it is insipid, but leaves an evident bitter saline taste on the tongue.

At rest, and on slight agitation, no smell is produced; but on stirring the water forcibly from the bottom of the reservoir, it becomes turbid from impurities which have been collected in it, and a considerable odour is emitted like the scouring of a foul gun-barrel.

Experiment 1.

Exposed in the temperature of 60°, in a few hours it parts with some trifling air-bubbles, and soon after has a milky turbidness. In a few days an earthy pellicle forms upon the surface, and a precipitation takes place on its being exposed for a week.

Experiment 2.

An infusion of litmus was rendered more intensely blue.

A trifling change of colour was produced on adding this infusion to the water, after it had been deprived of its carbonates by ebullition and filtration.

Experiment 3.

Paper, tinged blue by litmus, and afterwards reddened by distilled vinegar, had its colour restored, and somewhat heightened by it.

The deaërated water had no effect upon it.

Experiment 4.

Paper, stained by a spirituous tincture of Brazil wood, was rendered more deeply red.

Equal portions of the same tincture were added to equal portions of this water fresh from the spring; to the same deprived of its carbonates; and to distilled water: with the first the colour was somewhat deepened, but with the two latter it was unaltered.

Experiment 5.

Syrup of violets was instantly changed into a light green. The deaërated water also produced this change, but in a less degree.

Experiment 6.

Concentrated sulphuric and muriatic acids occasioned an evident disengagement of gas.

Experiment 7.

A solution of soap in spirit of wine was instantly curdled by it. The same effect was produced on the deaërated water.

Experiment 8.

Aërated kali occasioned a trifling precipitation.

Experiment 9.

With the pure kali a copious and immediate precipitation took place.

Experiment 10.

The mild volatile alkali caused a trifling cloud and a slight precipitation.

Experiment 11.

The caustic volatile alkali rendered it turbid, with a copious precipitation.

The effect was nearly the same with the deaërated water.

Experiment 12.

Strontian and common lime-water rendered it immediately turbid, and in a few minutes a copious precipitation ensued.

With the deaërated water the precipitation was somewhat less.

Experiment 13.

The oxalic acid occasioned an immediate slight precipitation. The same effect took place on adding it to the deaërated water.

Experiment 14.

Acetite of lead caused an immediate and copious *white* precipitation, which did not change colour on standing.

Experiment 15.

The muriate and nitrate of barytes produced an instantaneous and considerable precipitation.

Experiment 16.

The nitrate and acetite of silver occasioned trifling streaks, a slight precipitation, with a change of colour on exposure to light.

Experiment 17.

The prussiate of potash produced a very slight blue colour on standing several hours.

Experiment 18.

The tincture of galls caused a slight turbidity, and on standing two hours an iridescent pellicle was formed on its surface.

Experiment 19.

Acid of galls, on standing two hours, gave a slight purple tinge, which became blackish on standing a few days.

Experiment 20.

Quicksilver, previously cleansed by agitation in water, was put into a vessel containing this water, and exposed under a large surface for several hours, without producing either a film or precipitation.

Experiment 21.

A saturated solution of arsenic dropped into it did not effect the least change.

Experiment 22.

Nitrate of lead produced an immediate white precipitation, which did not change colour, though exposed for several days.

The decomposition which took place on exposure in Experiment 1, and the appearances produced by the reagents employed in Experiments 2, 3, 4, 5, and 6, prove that this water contains earthy carbonates; which is further exemplified by the effects produced by the same reagents on the deaërated water: and that magnesia and lime are the carbonates, is evident by the Experiments 11, 12, and 13.

We also learn, by the reagents employed in Experiments 7, 11, 12, and 13, that those earths existed in the water after the carbonic acid gas had been expelled; and their union with the sulphuric and muriatic acids is presumable by the presence of those acids being detected in Experiments 14, 15, and 16.

The appearances which occurred on the application of the reagents in Experiments 17, 18, and 19, indicate a minute portion of iron; and the non-existence of sulphurated hydrogen gas is clearly demonstrated by Experiments 20, 21, and 22.

This water then contains carbonic acid gas, earthy carbonates, earthy muriates and sulphates, a small portion of iron, and probably alkaline muriates and sulphates. With this investigation as a guide, I proceed to determine their respective proportions.

Experiment 23.

A wine gallon of this water, when boiled to a quart, yielded a considerable earthy precipitation, which was collected in a filter, and on being dried weighed 27½ grains.

The evaporation was continued to dryness, and a deliquescent residuum remained, which weighed, when dried at 120°, exactly 301 grains.

Experiment 24.

The carbonated substance obtained by the last experiment was treated with dilute muriatic acid (in the proportion of two drachms weight of the acid to three ounce measures of distilled water,) and filtered: one grain and a half remained insoluble, which was boiled in 800 times its weight of distilled water, and again filtered with a very trifling loss of weight; and, as the filtered liquor was not acted upon either by muriate of barytes, oxalic acid, caustic volatile alkali, or lime-water, it is clear that neither selenite nor alumine were among the carbonates.

By a previous experiment with a similar muriatic solution, the following were the results:

A portion of it, which had been saturated with carbonate of soda, shewed small traces of iron on adding tincture of galls.

The

The same effect was produced by the prussiate of potash.

A dusky red precipitation was likewise effected on adding to it the caustic volatile alkali.

And a white one on the application of the oxalic and sulphuric acids.

These appearances having determined the existence both of iron, magnesia, and lime, their several proportions were ascertained by the next experiment.

Experiment 25.

The caustic volatile alkali was added to the entire solution, as long as a reddish precipitation was produced. The precipitate thus formed was separated from the solution, and treated with distilled vinegar, as long as any magnesia was discovered by the application of the carbonate of soda: the magnesia thus precipitated was trifling, and was reserved in a filter for the purpose of collecting to it what might be further precipitated from the muriatic solution by the carbonate of soda.

The matter insoluble in distilled vinegar was redissolved in dilute muriatic acid, and precipitated by carbonate of potash: this precipitate was too small to affect a balance that would have answered to one eighth of a grain, but it became obedient to the magnet on being exposed to a red heat.

After the separation of this small portion of iron, strong sulphuric acid was dropped gradually into the solution, so long as any precipitate appeared; a small portion of alcohol was then added, and a slight heat applied. The sulphate of lime thus formed, being filtered off and exposed to a red heat for half an hour, to expel the excess of sulphuric acid, weighed 12 grains, which indicates $8\frac{40}{100}$ of carbonate of lime in a gallon of the water.

The magnesia which remained in the solution was precipitated by carbonate of soda, and added to what had been previously preserved; when both, being dried in a strong heat, weighed $10\frac{75}{100}$ grains.

Experiment 26.

The carbonate of magnesia, from its greater solubility in water, is not so easily separated from it by ebullition as lime: in order, therefore, to ascertain if more had been deposited during the latter part of the process of evaporation, the whole residuum was treated with boiling distilled water, added repeatedly in large quantities; and as the whole was redissolved, it is presumable that all the carbonate of magnesia had been previously collected by the filter.

Experiment

Experiment 27.

The whole residuum obtained by evaporation to dryness was digested some hours in spirit of wine of the density of 0,834, and edulcorated repeatedly with small quantities of it: after filtration the residuum was dried at 120°, when it was found that there were soluble in this menstruum 40 grains.

Experiment 28.

The residuary matter of the last experiment was digested twenty-four hours, in eight times its weight of cold distilled water, and filtered.

Experiment 29.

What remained in the filter of the foregoing experiment was boiled in 800 times its weight of distilled water, and passed through a filter.

Experiment 30.

The residue remaining in the filter of the last experiment, on being dried at 140°, barely weighed $1\frac{1}{2}$ grains.

Experiment 31.

The alcoholic solution, on being evaporated to dryness, yielded 40 grains of residuary matter, which were put into a crucible, and, on the application of 30 grains of sulphuric acid, white fumes were emitted. It was then placed in a strong heat, to expel the excess of sulphuric acid.

In order to ascertain whether magnesia or lime was the basis; and, if both were present, what were their relative proportions; cold distilled water was added, in the quantity of more than twice the weight of the dried mass. On the application of the water much remained undissolved in the bottom of the crucible, and a blackish flocculent substance floated on the liquor, which, being collected in a filter and dried, weighed barely three grains, and was probably extractive matter.

Thus sulphate of magnesia was separated from sulphate of lime. Both were afterwards converted into carbonates, by boiling them separately in a solution of corbonate of potash.

They were then severally converted into muriates, by adding muriatic acid to saturation; and, on being dried at the heat of 140°, their respective weights were ascertained to be, of

Muriate of magnesia - - - - 33 grains.
Muriate of lime - - - - - - $14\frac{75}{100}$ grains.

By a previous experiment the muriatic and sulphuric acids and magnesia were found to exist, in notable proportions, in the aqueous solutions.

Experiment 32.

Muriate of soda being the only muriate that could exist in the

the water in this state, its quantity was ascertained by dropping sulphate of silver into the solution, so long as any precipitation was produced.

The muriate of silver thus formed, when dried in a heat somewhat below ignition, weighed 31 grains, which denote about 13 grains of muriate of soda.

That the sulphates which remained in this solution might be estimated with greater accuracy, it was divided into two equal parts.

Experiment 33.

The portion *A* was treated with lime-water, and the sulphate of lime thus formed was expelled by adding oxalic acid and alcohol, and evaporating it to three ounces.

Nitrate of barytes being added to the filtered residuum, a precipitation of sulphate of barytes ensued, which, on being exposed to a red heat for an hour, weighed 97 grains, that is, 194 in a gallon, which denotes about 114 grains of desiccated sulphate of soda; but from it must be deducted the sulphate of soda, formed by precipitating the muriate of silver, which, by estimation, is about 15½ grains: this leaves exactly 98½ grains of desiccated, or 117½ of crystallized sulphate of soda, in a gallon of the water.

Experiment 34.

To the portion *B* was added a solution of carbonate of soda, to precipitate the magnesian earth; this earth, after having been repeatedly washed, and dried, weighed 22½ grains, that is, 45 grains in a gallon; which indicates about 265 grains of fully crystallized sulphate of magnesia, as it existed in the water.

Experiment 35.

The solution obtained by boiling was precipitated in great abundance on the application of the oxalic acid and muriate of barytes: traces also of muriatic acid were discovered on adding to it the nitrate and sulphate of silver.

In consequence of this latter circumstance it was evaporated to dryness, and a pellicle, which formed during the latter part of the process, was collected and preserved on bibulous paper, which, when dried, weighed 5 grains, and, on being placed under a microscope, exhibited well-defined cubes.

The remainder, when evaporated to dryness, weighed 42 grains, and, of course, could be no other than sulphate of lime.

Experiment

Experiment 36.

A wine gallon of this water yielded, by boiling briskly for a quarter of an hour, $23\frac{1}{2}$ cubic inches of gas; of which

18 were carbonic acid gas,

$5\frac{1}{2}$ an air very much resembling the atmospherical.

The carbonic acid gas was absorbed by strontian lime-water; and the purity of the remaining air was examined by nitrous gas: it therefore contains about a tenth part of its bulk of gas.

I am particularly indebted to my friends, Dr. Babington and Mr. C. R. Aikin, for this experiment, which was made with water just taken from the spring.

From the foregoing analysis it appears, that a wine gallon of the Kilburn water contains a variety of mineralizers, and that they are nearly in the proportions following:

	Grains.
Oxyd of iron, not appreciable.	
Carbonate of lime	$8\frac{40}{100}$
——— of magnesia	$10\frac{75}{100}$
Extractive matter	3
Muriate of magnesia	33
——— of lime	$14\frac{75}{100}$
——— of soda, indicated by the muriate of silver in Experiment 32 — 13; D° by Experiment 35 — 5	18
Sulphate of soda	$117\frac{50}{100}$
——— of magnesia	265
——— of lime	42
Insoluble matter	$1\frac{50}{100}$
	$513\frac{90}{100}$

Gaseous Contents.

	Cubic Inches.
Of carbonic acid gas	18
Of common air of ordinary purity	5,5
	23,5

To prove, beyond the possibility of a doubt, that, if sulphurated hydrogen gas had existed in this water, even in the minutest portion, it would have been discovered by its usual tests, I added an ounce measure of the sulphureous water of Harrowgate to a pint of it, and the following were the results:

A piece of silver put into a small quantity of it became tarnished in a few seconds.

Quicksilver, previously cleansed, had a film formed upon its surface in the course of an hour.

Characters, traced upon paper with a solution of acetite of lead, were rendered legible and of a dark brown colour, on placing them a few minutes over a vessel containing a portion of the mixed waters.

Nitrate and acetite of lead being added, instantly produced a brownish precipitation; which change was likewise effected (though in a slighter degree) even when the waters were united, in the proportions of two drachms of the Harrowgate to a pint of the Kilburn.

This is therefore a simple saline water, containing a small portion of iron, too trifling to give it the character of a chalybeate.

Although the saline matter it contains is not abundant, yet it yields, by evaporation to dryness, nearly half a drachm more of residuum in a gallon than was obtained by Dr. Lucas from the Epsom water.

A pint of it, according to this analysis, contains about a drachm and four grains of crystallized purging salts, and nearly nine drachms and a half in bulk of carbonic acid gas: it is therefore drank in tolerably large quantities to produce a purgative effect. From one to three pints are usually taken, and at very short intervals. Its operation is slow and gentle, a circumstance of unquestionable importance to persons whose stomachs are delicate and irritable.

When it does not operate as a purgative, it in general increases the action of the kidnies.

Its full dose will sometimes produce uneasy sensations in the stomach, and a slight drowsiness, owing probably, in a great measure, to distention, but principally to the sudden extrication of the carbonic acid gas.

My own experience of the medicinal effects of this water does not authorize me to enlarge, with any degree of confidence, upon the diseases in which it may be found beneficial.

Its gradual and mild action upon the stomach and intestinal canal may render it useful in cases of habitual constipation, when the stronger saline and more violent drastic purgatives would be injurious; more especially as it may be persevered in with

with impunity until these parts have recovered their natural functions.

It may likewise be employed with advantage in cases of indigestion arising from crudities in the stomach; the viscid matter already accumulated may be removed, and its future collection prevented, by a long perseverance in it: hence its usefulness to persons of a sedentary life, whose occupations naturally induce a sluggish action in the stomach, and its usual consequences, dyspepsia, hypochondriasis, &c. &c.

From the mildness of its operation, the Kilburn water is also calculated to be serviceable in cases of hæmorrhois, and other painful affections of the rectum, to which females are particularly liable, and in which more irritating aperient medicines might be improper.

MEDICAL INTELLIGENCE.

[Three or four pages of miscellaneous information, similar to this, will be given every Number.]

On the Cure of Paralysis by Galvanism.

By accounts from Berlin, it appears that Dr. Grappergiesser, and Professor Herz, have applied galvanism successfully in the treatment of diseases which are the consequence of paralysis, or weakness of the nerves of any part, such as deafness. They used the galvanic pile.

Journal de Physique, Floreal, An 9.

Dr. Thilow, of Erfurt, has made several galvanic experiments with nitre, in order to shew that it has a debilitating effect upon the nervous and muscular fibre. Nitre was applied to the crural nerve of a frog, but without producing the slightest convulsive motions, which, however, were immediately excited when it was touched with common salt. The lively motion of the heart of a frog was immediately stopped by a little nitre scattered upon it.

In Hufeland's Practical Journal, manganese finely powdered, made up into an ointment, with suet, is much recommended in scabies.

Sometime ago a supposed new alkali was described by Dr. Hahnemann in Crell's Chemical Annals, under the name of Pneum, and sold by him at the enormous price of sixteen louis d'ors a pound. Klaproth and Tromsdorf have, however,

found that it is nothing but mere borax. The latter chemist very justly reproves Dr. H. for having attempted to impose upon the public with a degree of confidence that equals the impudence of the grossest quack, as it is hardly probable Dr. H. should have been so ignorant as not to know that it was really nothing but borax.

Mr. Girault praises the good effects of warm muriatic baths in arthritic complaints. He laboured himself under a very obstinate gout, against which he used the saline warm baths of Pyrmont, during six weeks, with such success, that he felt himself greatly relieved after the fifth bath; and, by degrees, the swellings of the joints disappeared, the limbs recovered their former activity, and the whole constitution was remarkably improved.

Dr. Kurzwig, of Riga, relates the history of a successful Cæsarean operation, by which a dead child was extracted. The pelvis of the woman, on whom the operation was performed, measured only two inches in its smallest diameter. She had been in labour for above three days. As the child offered no resistance for using the perfatorium, and as there was no possibility of applying the forceps, the Cæsarean section was thought necessary in order to deliver the woman. The first incision was made in the *linea alba*, to the extent of eight inches; the loss of blood was inconsiderable. A corresponding incision being now made in the uterus, which was hardly one line thick, the back of the child appeared; that was already putrid. The funiculus umbilicalis was cut through without much loss of blood. The uterus contracted itself very fast, particularly round the placenta, which, on that account, was taken out with much difficulty. The application of the suture caused much pain to the patient. In the course of three months she was entirely cured; and all the symptoms during this period had been very slight. On the seventh day after the operation, a piece of the omentum separated, which had been incarcerated in the lower part of the wound.

Another case of Cæsarean operation, which, though performed under the most happy appearances, proved fatal, is related by Dr. Klein, of Stuttgard. The pelvis of the woman was extremely distorted, and the child living. The incision in the abdomen was made on the right side, at a distance of two inches from the umbilicus, in an oblique direction towards the

the axis of the pelvis, because the uterus, by contracting itself, became so inverted, that its internal surface was quite turned outwardly. The woman died four days after the operation. Dr. Klein states, that of one hundred and sixteen cases of the Cæsarean operation, which he found related, ninety were attended with successful issue, whereas twenty-six proved mortal. It is, however, remarkable, that there are more fatal cases mentioned in modern times, where the operation less frequently occurred, than from the year 1500 till 1769, when six mortal, and seventy-six successful cases are recorded. This Dr. Klein seems inclined to ascribe to the mode of treatment, which, according to him, ought to consist of gentle purgatives that do not weaken the constitution, and of cold strengthening fomentations to the belly.

In addition to the above cases, Professor Loder, of Jena, considers the Cæsarean operation by no means so difficult and dangerous as has been thought, as it is not attended with much pain, nor requires any particular art or dexterity. He is of opinion, that, generally, a fatal termination ensued when it was undertaken too late, a circumstance which may more easily occur when such a patient is attended by any celebrated accoucheur, whose skill induces him to try other expedients which his art affords him, before he determines to undertake the Cæsarean operation. On the whole, Professor Loder advises to make the incision in the *linea alba*.

Dr. Golis, physician to the institution for infantile diseases, at Vienna, states, in an account of the diseases which occurred in this institution, that among different affections to which the infantile age is exposed, seven children had been seized by what he styles the *blue fever*, of which six recovered and one died. This morbid affection attacks children, particularly from the age of four months to one year: without any evident cause, and without losing their natural vivacity, or without shewing any sense of pain, they begin to grow blue over the whole body; the natural heat decreases, the pulse becomes slow and weak, a great lassitude is perceived in all their motions; the eyes lose their brightness and become languid, and are always fixed on one spot; the breath gets cold; the respiration, quick and short, is often imperceptible, and recommences with a deep sigh. On a sudden they cry with a particular voice, bending themselves, and their countenance expresses marks of the most violent pain. This lasts only a few minutes, but recurs again in a short space, being, at the same time,

time, attended with a voracious appetite and an insatiable thirst. Their stools are white and hard; but a few hours before death they become watery. The urine is without colour, but evacuated with preternatural copiousness: the skin soft, but clammy and cold. In the progress of the disease they grow weaker by degrees, they cease to cry or give signs of pain, and die in a stupor, if medical assistance has been neglected in the beginning. *Medical and Physical Journal.*

Though Dr. Golis has not seen any description of this disease by any medical writer, it appears to be the same which Dr. Beddoes mentions as occurring in the lying-in hospital of Dublin, owing to a want of sufficiently pure air. In the year 1782, out of seven thousand six hundred and fifty infants, two thousand nine hundred and forty-four died, after having exhibited appearances similar to those described by Dr. Golis; but after the wards were well ventilated, this mortality ceased.

The cow-pock inoculation has been introduced at *Milan*, and other parts of Italy; and this inoculation has, in one year, made more progress in Italy than had previously been made in the inoculation for the small-pox.

Don Joseph Celestino Mutis, director of the royal botanic expedition in the new kingdom of *Granada*, in South America, is about to publish the *Flora of Granada*, which will comprehend some thousands of plants, and a great number of new species, with their descriptions. The Professor has been forty years in America, the greatest part of which time he has devoted to botany.

The experiment of castration has been lately performed at Paris on one of the young lions whelped three or four months ago, at the Museum of Natural History. That one was selected which announced the strongest character of ferocity. This, it is presumed, was the first time that a similar operation was performed on an animal of this kind.

Mr. Hufeland, the celebrated author of the Art of prolonging Life, has left Jena and gone to Berlin, where he is appointed, in the room of Dr. Sellen, second director of the *Collegium Medico-chirurgicum*, with the title and rank of a privy-counsellor. He has likewise been nominated member in ordinary of the Royal Academy of Sciences in the physical class, with a salary of four hundred rix-dollars a year.

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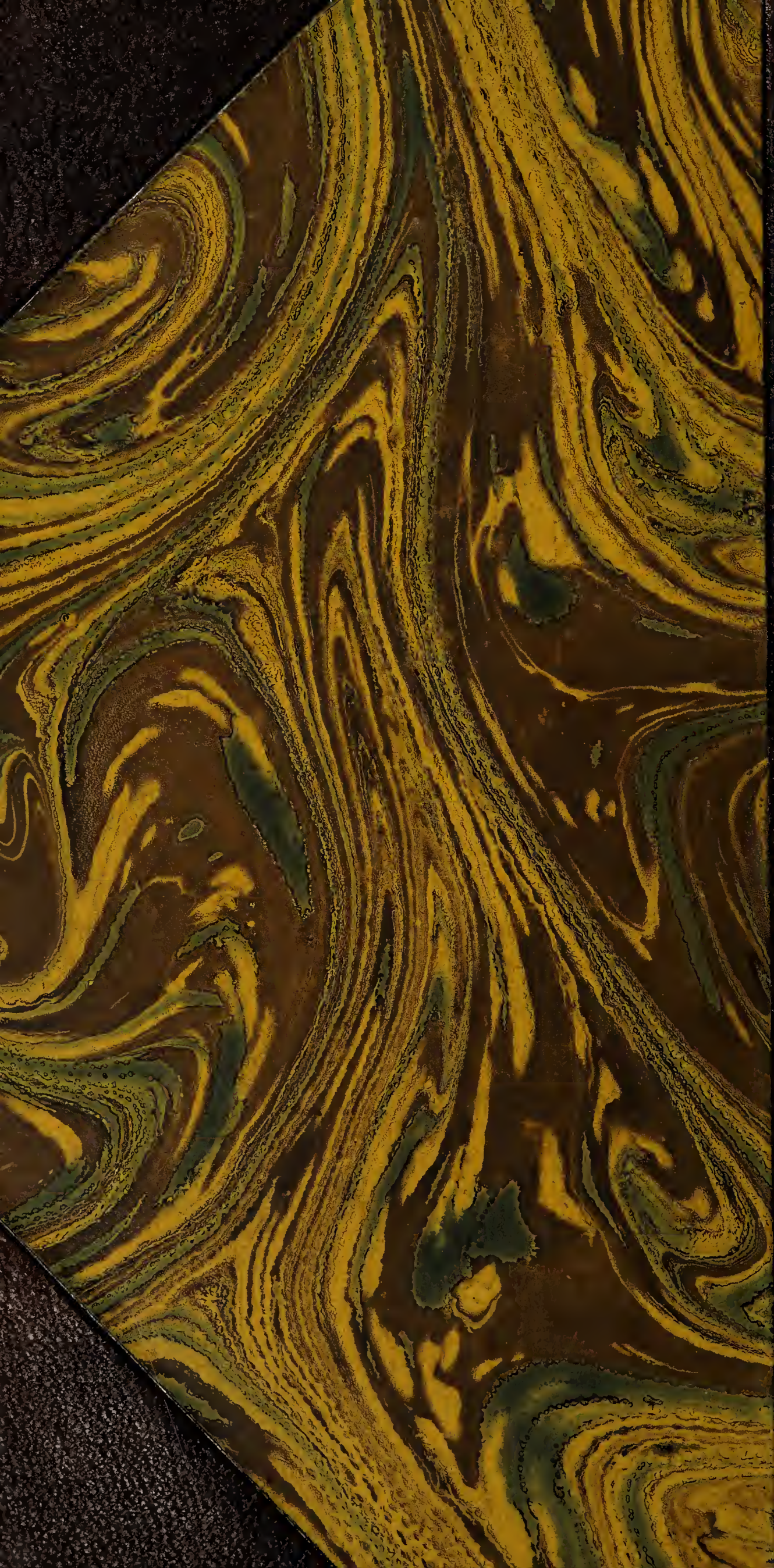
END OF THE SIXTH VOLUME.

DIRECTIONS FOR PLACING THE PLATES.

The Engraving of an ARTIFICIAL PUPIL, and the HARE-LIP OPERATION, faces page 67.

The Engraving to illustrate the Case of LEPRA GRÆCORUM should face page 262.

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